# **NACOmatic**

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#### GENERAL INFORMATION

This Airport/Facility Directory is a Civil Flight Information Publication published and distributed every eight weeks by the National Aeronautical Charting Office, FAA, Department of Transportation, Silver Spring, Maryland 20910. It is designed for use with Aeronautical Charts covering the conterminous United States, Puerto Rico and the Virgin Islands.

This directory contains all open to the public airports, seaplane bases and heliports, military facilities, and selected private use facilities specifically requested by the Department of Defense (DoD) for which a DoD Instrument Approach Procedure has been published in the U.S. Terminal Procedures Publication. Additionally, this directory contains communications data, navigational facilities and certain special notices and procedures.

Military data contained within this publication is provided by the National Geospatial-Intelligence Agency and is intended to provide reference data for military and/or joint civil/military airports. Not all military data contained in this publication is applicable to civil users.

#### CORRECTIONS, COMMENTS, AND/OR PROCUREMENT

CRITICAL information such as equipment malfunction, abnormal field conditions, hazards to flight, etc., should be reported as soon as possible to the nearest FAA facility, either in person or by reverse charge telephone call.

#### FOR AIRPORT SUPPLEMENT REVISIONS FORM VISIT WEB SITE: http://nfdc.faa.gov/portal/airportchanges.do

FAA, Aeronautical Information Services, ATO-R, Rm. 626

800 Independence Ave., SW

Washington, DC 20591

Telephone 1-866-295-8236

Fax 202-267-5322

Email 9-ATOR-HQ-AIS-AIRPORTCHANGES@FAA.GOV

NOTICE: Changes must be received by the Aeronautical Information Services as soon as possible but not later than the "cut-off" dates listed below to assure publication on the desired effective date.

	Airport Information	Airspace Information*
Effective Date	Cut-off date	Cut-off date
17 Dec 09	4 Nov 09	15 Oct 09
11 Feb 10	30 Dec 09	10 Dec 09
8 Apr 10	24 Feb 10	4 Feb 10
3 Jun 10	21 Apr 10	1 Apr 10
29 Jul 10	16 Jun 10	27 May 10
23 Sep 10	11 Aug 10	22 Jul 10

<sup>\*</sup>Including changes to preferred routes and graphic depictions on charts.

#### FOR CHARTING ERRORS CONTACT:

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FAA, National Aeronautical Charting Office, ATO-W

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1305 East West Highway

Silver Spring, MD 20910-3281

Telephone 1-800-626-3677

Email 9-AMC-Aerochart@faa.gov

Frequently asked questions (FAQs) are answered on our web site at <a href="www.naco.faa.gov">www.naco.faa.gov</a>. See the FAQs prior to contact via toll free number.

#### FOR PROCUREMENT CONTACT:

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10201 Good Luck Road

Glenn Dale, MD 20769-9700

Online at www.naco.faa.gov

Email 9-AMC-Chartsales@faa.gov

Telephone 1-800-638-8972

Fax 301-436-6829

or any authorized FAA Chart Agent

New or Changed Information—To alert users of new information or changes to information from the previous issue, a vertical line will be portrayed in the outside margin and extending the full length of the new and/or revised data. This will not apply to the front cover or the airport/facility directory listing.

This Airport/Facility Directory comprises part of the following sections of the United States Aeronautical Information Publication (AIP): GEN, ENR and AD.

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#### **ABBREVIATIONS**

The following abbreviations/acronyms are those commonly used within this Directory. Other abbreviations/acronyms may be found in the Legend and are not duplicated below. The abbreviations presented are intended to represent grammatical variations of the basic form. (Example-"req" may mean "request", "requesting", "requested", or "requests").

AAF	Army Air Field	byd	beyond
AB	Airbase	С	Commercial Circuit (Telephone)
abv	above	CGAF	Coast Guard Air Facility
ACC	Air Combat Command; Area Control	CGAS	Coast Guard Air Station
	Center	CIV	Civil
acft	aircraft	clsd	closed
ADCC	Air Defense Control Center	comd	command
AER	approach end rwy	CONUS	Continental United States
AFB	Air Force Base	CSTMS	Customs
AFHP	Air Force Heliport	ctc	contact
afld	airfield	ctl	control
AFOD	US Army Flight Operations Detachment	dalgt	daylight
AFRC	Armed Forces Reserve Center/Air Force	Dec	December
	Reserve Command	DIAP	DoD Instrument Approach Procedure
AFSS	Automated Flight Service Station	DoD	Department of Defense
AG	Agriculture	DSN	Defense Switching Network (Telephone)
A-GEAR	Arresting Gear	dsplcd	displaced
AGL	above ground level	durn	duration
AHP	Army heliport	eff	effective
ALS	Approach Light System	emerg	emergency
alt	altitude	EOR	End of Runway
AMC	Air Mobility Command	ETA	Estimated Time of Arrival
ANGS	Air National Guard Station	ETD	Estimated Time of Departure
apch	approach	exc	except
Apr	April	extd	extend
APU	Auxiliary Power Unit	FBO	fixed-base operator
ARB	Air Reserve Base	Feb	February
arpt	airport	fld	field
ARS	Air Reserve Station	FLIP	Flight Information Publication
AS	Air Station	flt	flight
ASDE-X	Airport Surface Detection Equipment—	flw	follow
	Model X	Fri	Friday
ASU	Aircraft Starting Unit	FSS	Flight Service Station
ATC	Air Traffic Control	GA	glide angle
Aug	August	GCA	Ground Controlled Approach
AUW	All Up Weight (gross weight)	GS	glide slope
avbl	available	haz	hazard
bcn	beacon	HQ	Headquarters
blo	below		

#### CONTINUED ON NEXT PAGE

#### CONTINUED FROM PRECEDING PAGE

hr hour non precision instrument ΙΔΡ Instrument Approach Procedure NS ABTMT Noise Abatement ICAC International Civil Aviation Organization NSTD nonstandard IFR Instrument Flight Rules ntc notice ILS Instrument Landing System obsn observation IM Inner Marker Oct October IMG Immigration OI F Outlying Field

incr increase onr operate, operator, operational

indet indefinite ons operations intensity OTS out of service ints invof in the vicinity of ovrn overrun

lan

NADC

IMC Instrument Meteorological Conditions PAFW personnel and equipment working

pattern Jet Aircraft Starting Unit IASI p-line power line JOAP Joint Oil Analysis Program **PMSV** Pilot-to-Metro Service IOSAC Joint Operational Support Airlift Center PΩI

Petrol, Oils and Lubricants IRB Joint Reserve Base PPR prior permission required Jul July PRM Precision Runway Monitoring Jun June PTD Pilot to Dispatcher

Κt Knots RAMCC Regional Air Movement Control Center

nat

LAA Local Airport Advisory rea request LAHSO Land and Hold Short Operations rgt tfc right traffic RON Remain Overnight lhs nounds ldg landing rar require lighted rstd lgtd restricted

RSRS løts lights reduced same runway separation

LMM Compass locator at Middle Marker ILS rw/v runway LOC Localizer Sat Saturday

LOM Compass locator at Outer Marker ILS SFLE Strategic Expeditionary Landing Field

limited Sen Itd September MACC Military Area Control Center SFA

Single Frequency Approach March efe Mar surface

SFRA

MCAF Marine Corps Air Facility Special Flight Rules Area SOAP MCALE

Marine Corps Auxiliary Landing Field Spectrometric Oil Analysis Program SOF

Supervisor of Flying MCAS Marine Corps Air Station Marine Corps Base SPR MCB Seaplane Base SP med medium sunrise

SS METRO Pilot-to-Metro voice call sunset Mil military std standard min minute Sur Sunday MLS Microwave Landing System SVC service MM Middle Marker of ILS tfc traffic Mon Monday thld threshold MP Maintenance Period Thu Thursday MSI mean sea level tkf take-off MSAW minimum safe altitude warning tmnrv temporary NAAS Naval Auxiliary Air Station tran transient

Naval Air Development Center

NADER Naval Air Depot twr tower Naval Air Engineering Center NAEC twv taxiway NAFS Naval Air Engineering Station UC Under Construction Naval Air Facility USA United States Army NAF

NALCO Naval Air Logistics Control Office USAF United States Air Force USCG NALO Navy Air Logistics Office United States Coast Guard NALE Naval Auxiliary Landing Field USN United States Navy

NAS Naval Air Station Defense Switching Network (telephone,

Tue

Tuesday

NAWC Naval Air Warfare Center formerly AUTOVON) NAWS Naval Air Weapons Station VFR Visual Flight Rules VIP night Very Important Person ngt

NOLF Naval Outlying Field VMC Visual Meteorological Conditions

Nov November Wed Wednesday wx weather

#### SAMPI F CITY NAME AIRPORT NAME (ALTERNATE NAME) (LTS) (KLTS) CIV/MIL 3 N UTC-6(-5DT) N34°41.93′ W99°20.20′ JACKSONVILLE S4 FUEL 100 OX 1 TPA-1000(800) AOE Class IV. ARFF Index A NOTAM FILE ORL Not insp. H-4G I-19C (19) (20) IAP. DIAP. AD (11)(12)(13)(14)(15)(16)(18)(21) RWY 18-36: H12004X200 (ASPH-CONC-GRVD) 9 S-90, D-160, DT-300 PCN 80 R/B/W/T HIRL RWY 18: LDIN, MALSF, TDZL, REIL, PAPI(P2R)-GA 3.0° TCH 36'. Rwy 173-353: 3515 X 150 Thid dspicd 300'. Trees. Rgt tfc. 0.3% up. RWY 36: ALSF1. 0.4% down. 81 Č ä RWY 09-27: H6000X150 (ASPH) MIRL G G 000 RWY 173-353: H3515X150 (ASPH-PFC) AUW PCN 59 F/A/W/T 113 LAND AND HOLD SHORT OPERATIONS Ø €3 DIST AVRI HOLD SHORT POINT LANDING Ø C3 €3 €3 **RWY 18** 09-27 6500 2004 X **RWY 36** 09-27 5400 8 RUNWAY DECLARED DISTANCE INFORMATION 353 RWY 18: TORA-12004 TODA-12704 ASDA-11704 LDA-11504 q١ RWY 36: TORA-12004 TODA-12004 ASDA-12004 LDA-11704 6000 X 150 ARRESTING GEAR/SYSTEM RWY 18 → HOOK E5 (65' OVRN) BAK-14 BAK-12B (1650') BAK-14 BAK-12 (B) (1087') HOOK E5 (74' OVRN) ← RWY 36 MILITARY SERVICE: A-GEAR E-5 connected on dep end, disconnected on JASU 3(AM32A-60) 2(A/M32A-86) apch end. 33 36 (24) (25)→ FUEL J8(Mil) (NC-100, A) FLUID W SP PRESAIR LOX ← (10) OIL 0-128 TRAN ALERT Avbl 1300-0200Z‡, svc limited weekends. 27 (28 AIRPORT REMARKS: Special Air Traffic Rules—Part 93, see Regulatory Notices. Attended 1200-0300Z‡. Parachute Jumping, Deer invof arpt, Heavy jumbo jet training surface to 9000', Twy A clsd indef. Flight Notification Service (ADCUS) avbl. (30) MILITARY REMARKS: ANG PPR/Official Business Only. Base OPS DSN 638-4390, C503-335-4222. Ctc Base OPS 15 minutes prior to Idg and after dep. Limited tran parking. (31) WEATHER DATA SOURCES: AWOS-1 120.3 (202) 426-8000. LLWAS. COMMUNICATIONS: SFA ATIS 127.25 273.5 (202) 426-8003 UNICOM 122.95 PTD 372.2 NAME FSS (ORL) on arpt. 123.65 122.65 122.2 NAME RC0 112.2T 112.1R (NAME RADIO) R NAME APP/DEP CON 128.35 257.725 (1200-0400Z‡) TOWER 119.65 255.6 (1200-0400Z‡) GND CON 121.7 GCO 135.075 (ORLANDO CLNC) **CLNC DEL** 125.55 NAME COMD POST (GERONIMO) 311.0 321.4 6761 PMSV METRO 239.8 NAME OPS 257 5 (33)→ AIRSPACE: CLASS B See VFR Terminal Area Chart. RADIO AIDS TO NAVIGATION: NOTAM FILE ORL. VHF/DF ctc FSS. Chan 59 N28°32.55' W81°20.12' (H) VORTAC 112.2 MCO at fld. (H) TACAN Chan 29 CBU (109.2) N28°32.65′ W81°21.12′ at fld. 1115/8E. HERNY NDB (LOM) 221 OR N28°37.40′ W81°21.05′ 177° 5.4 NM to fld. ILS/DME 108.5 I-ORL Chan 22 Rwy 18. Class IIE. LOM HERNY NDB ASR/PAR (1200-0400Z‡)

COMM/NAV/WEATHER REMARKS: Emerg frequency 121.5 not avbl at twr.

HELIPAD H1: H100X75 (ASPH) HELIPAD H2: H60X60 (ASPH)

HELIPORT REMARKS: Helipad H1 lctd on general aviation side and H2 lctd on air carrier side of arpt.

187 TPA 1000(813)

WATERWAY 15-33: 5000X425 (WATER)

**SEAPLANE REMARKS:** Birds roosting and feeding areas along river banks. Seaplanes operating adjacent to SW side of arpt not visible from twr and are required to ctc twr.

All bearings and radials are magnetic unless otherwise specified.
All mileages are nautical unless otherwise noted.
All times are Coordinated Universal Time (UTC) except as noted.
All elevations are in feet above/below Mean Sea Level (MSL) unless otherwise noted.
The horizontal reference datum of this publication is North American Datum of 1983 (NAD83), which for charting purposes is considered equivalent to World Geodetic System 1984 (WGS 84).

10 SKETC	H LEGEND
runways/landing areas	radio aids to navigation
Hard Surfaced	VORTAC
Metal Surface	VOR/DME NDB
Sod, Gravel, etc	TACAN NDB/DME
Light Plane,	MISCELLANEOUS AERONAUTICAL FEATURES
Closed	Airport Beacon
Helicopter Landings Area H	Landing Tee ⊢
Displaced Threshold 0	Tetrahedron         ►           Control Tower         S
Taxiway, Apron and Stopways	A DDD O A CILLICUTINIC CVCTEAC
MISCELLANEOUS BASE AND CULTURAL FEATURES	APPROACH LIGHTING SYSTEMS  A dot " • " portrayed with approach lighting letter identifier indicates sequenced flashing lights (F) installed with the approach lighting
Buildings	system e.g. (A) Negative symbology, e.g., (A) vindicates Pilot Controlled Lighting (PCL).
Power Lines	Runway Centerline Lighting
Fence	Approach Lighting System ALSF-2
Towers	Approach Lighting System ALSF-1
Tanks	SALS/SALSF
Oil Well	Medium Intensity Approach Lighting System (MALS and MALSF)/(SSALS
Smoke Stack	A Medium Intensity Approach Lighting
Obstruction	System (MALSR) and RAIL
Controlling Obstruction	D Navy Parallel Row and Cross Bar
ପ ଓ ଓ ଓ ଓ Trees	Air Force Overrun
Populated Places	Standard Threshold Clearance provided     Pulsating Visual Approach Slope Indicator     (PVASI)
Cuts and Fills Cut	Visual Approach Slope Indicator with a threshold crossing height to accomodate long bodied or jumbo aircraft
Cliffs and Depressions	Tri-color Visual Approach Slope Indicator (TRCV)
Ditch	(Vs) Approach Path Alignment Panel (APAP)
Hill	P Precision Approach Path Indicator (PAPI)

#### LEGEND

This directory is a listing of data on record with the FAA on all open to the public airports, military facilities and selected private use facilities specifically requested by the Department of Defense (DoD) for which a DoD Instrument Approach Procedure has been published in the U.S. Terminal Procedures Publication. Additionally this listing contains data for associated terminal control facilities, air route traffic control centers, and radio aids to navigation within the conterminous United States, Puerto Rico and the Virgin Islands. Joint civil/military and civil airports are listed alphabetically by state, associated city and airport name and cross-referenced by airport name. Military facilities are listed alphabetically by state and official airport name and cross-referenced by associated city name. Navaids, flight service stations and remote communication outlets that are associated with an airport, but with a different name, are listed alphabetically under their own name, as well as under the airport with which they are associated.

The listing of an open to the public airport in this directory merely indicates the airport operator's willingness to accommodate transient aircraft, and does not represent that the facility conforms with any Federal or local standards, or that it has been approved for use on the part of the general public. Military and private use facilities published in this directory are open to civil pilots only in an emergency or with prior permission. See Special Notice Section, Civil Use of Military Fields.

The information on obstructions is taken from reports submitted to the FAA. Obstruction data has not been verified in all cases, Pilots are cautioned that objects not indicated in this tabulation (or on the airports sketches and/or charts) may exist which can create a hazard to flight operation. Detailed specifics concerning services and facilities tabulated within this directory are contained in the Aeronautical Information Manual, Basic Flight Information and ATC Procedures.

The legend items that follow explain in detail the contents of this Directory and are keyed to the circled numbers on the sample on the preceding pages.

### 1 CITY/AIRPORT NAME

Civil and joint civil/military airports and facilities in this directory are listed alphabetically by state and associated city. Where the city name is different from the airport name the city name will appear on the line above the airport name. Airports with the same associated city name will be listed alphabetically by airport name and will be separated by a dashed rule line. A solid rule line will separate all others. FAA approved helipads and seaplane landing areas associated with a land airport will be separated by a dotted line. Military airports are listed alphabetically by state and official airport name.

# 2 ALTERNATE NAME

Alternate names, if any, will be shown in parentheses.

# (3) LOCATION IDENTIFIER

The location identifier is a three or four character FAA code followed by a four-character ICAO code assigned to airports. ICAO codes will only be published at joint civil/military, and military facilities. If two different military codes are assigned, both codes will be shown with the primary operating agency's code listed first. These identifiers are used by ATC in lieu of the airport name in flight plans, flight strips and other written records and computer operations. Zeros will appear with a slash to differentiate them from the letter "O".

### (4) OPERATING AGENCY

Airports within this directory are classified into two categories, Military/Federal Government and Civil airports open to the general public, plus selected private use airports. The operating agency is shown for military, private use and joint civil/military airports. The operating agency is shown by an abbreviation as listed below. When an organization is a tenant, the abbreviation is enclosed in parenthesis. No classification indicates the airport is open to the general public with no military tenant.

Α US Army MC Marine Corps AFRC Air Force Reserve Command N Navv US Air Force Naval Air Facility ΔF NAF ANG Air National Guard NAS Naval Air Station

AR US Army Reserve NASA National Air and Space Administration
ARNG US Army National Guard P US Civil Airport Wherein Permit Covers
CG US Coast Guard Use by Transient Military Aircraft
CIV/MIL Joint Use Civil/Military PVT Private Use Only (Closed to the Public)

DND Department of National Defense Canada

# (5) AIRPORT LOCATION

Airport location is expressed as distance and direction from the center of the associated city in nautical miles and cardinal points, e.g., 4 NE.

# (6) TIME CONVERSION

Hours of operation of all facilities are expressed in Coordinated Universal Time (UTC) and shown as "Z" time. The directory indicates the number of hours to be subtracted from UTC to obtain local standard time and local daylight saving time UTC-5(-4DT). The symbol ‡ indicates that during periods of Daylight Saving Time effective hours will be one hour earlier than shown. In those areas where daylight saving time is not observed the (-4DT) and ‡ will not be shown. Daylight saving time is in effect from 0200 local time the second Sunday in March to 0200 local time the first Sunday in November. Canada and all U.S. Conterminous States observe daylight saving time except Arizona and Puerto Rico, and the Virgin Islands. If the state observes daylight saving time and the operating times are other than daylight saving times, the operating hours will include the dates, times and no ‡ symbol will be shown, i.e., April 15-Aug 31 0630-1700Z, Sep 1-Apr 14 0600-1700Z.

# 7 GEOGRAPHIC POSITION OF AIRPORT—AIRPORT REFERENCE POINT (ARP)

Positions are shown as hemisphere, degrees, minutes and hundredths of a minute and represent the approximate geometric center of all usable runway surfaces.

# 8 CHARTS

Charts refer to the Sectional Chart and Low and High Altitude Enroute Chart and panel on which the airport or facility is located. Helicopter Chart locations will be indicated as COPTER. IFR Gulf of Mexico West and IFR Gulf of Mexico Central will be depicted as GOMW and GOMC.

# (9) INSTRUMENT APPROACH PROCEDURES, AIRPORT DIAGRAMS

IAP indicates an airport for which a prescribed (Public Use) FAA Instrument Approach Procedure has been published. DIAP indicates an airport for which a prescribed DoD Instrument Approach Procedure has been published in the U.S. Terminal Procedures. See the Special Notice Section of this directory, Civil Use of Military Fields and the Aeronautical Information Manual 5–4–5 Instrument Approach Procedure Charts for additional information. AD indicates an airport for which an airport diagram has been published. Airport diagrams are located in the back of each A/FD volume alphabetically by associated city and airport name.

# 10 AIRPORT SKETCH

The airport sketch, when provided, depicts the airport and related topographical information as seen from the air and should be used in conjunction with the text. It is intended as a guide for pilots in VFR conditions. Symbology that is not self-explanatory will be reflected in the sketch legend. The airport sketch will be oriented with True North at the top. Airport sketches will be added incrementally.

# (11) ELEVATION

The highest point of an airport's usable runways measured in feet from mean sea level. When elevation is sea level it will be indicated as "00". When elevation is below sea level a minus "-" sign will precede the figure.

# (12) ROTATING LIGHT BEACON

B indicates rotating beacon is available. Rotating beacons operate sunset to sunrise unless otherwise indicated in the AIRPORT REMARKS or MILITARY REMARKS segment of the airport entry.

# (13) SERVICING—CIVIL

S1:	Minor airframe repairs.	S5:	Major airframe repairs.
S2:	Minor airframe and minor powerplant repairs.	S6:	Minor airframe and major powerplant repairs.
S3:	Major airframe and minor powerplant repairs.	S7:	Major powerplant repairs.
S4:	Major airframe and major powerplant repairs.	S8:	Minor powerplant repairs.
$\sim$			

### (14) FUEL

CODE	FUEL	CODE	FUEL
80	Grade 80 gasoline (Red)	B+	Jet B, Wide-cut, turbine fuel with FS-II*, FP**
100	Grade 100 gasoline (Green)		minus 50° C.
100LL	100LL gasoline (low lead) (Blue)	J4 (JP4)	(JP-4 military specification) FP** minus
115	Grade 115 gasoline (115/145 military		58° C.
	specification) (Purple)	J5 (JP5)	(JP-5 military specification) Kerosene with
A	Jet A, Kerosene, without FS-II*, FP** minus		FS-11, FP** minus 46°C.
	40° C.	J8 (JP8)	(JP-8 military specification) Jet A-1, Kerosene
A+	Jet A, Kerosene, with FS-II*, FP** minus		with FS-II*, FP** minus 47°C.
	40°C.	J8+100	(JP-8 military specification) Jet A-1, Kerosene
A1	Jet A-1, Kerosene, without FS-II*, FP**		with FS-II*, FP** minus 47°C, with-fuel
	minus 47°C.		additive package that improves thermo
A1+	Jet A-1, Kerosene with FS-II*, FP** minus		stability characteristics of JP-8.
	47° C.	J	(Jet Fuel Type Unknown)
В	Jet B, Wide-cut, turbine fuel without FS-II*,	MOGAS	Automobile gasoline which is to be used
	FP** minus 50° C.		as aircraft fuel.

<sup>\*(</sup>Fuel System Icing Inhibitor)

NOTE: Certa

Certain automobile gasoline may be used in specific aircraft engines if a FAA supplemental type certificate has been obtained. Automobile gasoline, which is to be used in aircraft engines, will be identified as "MOGAS", however, the grade/type and other octane rating will not be published.

Data shown on fuel availability represents the most recent information the publisher has been able to acquire. Because of a variety of factors, the fuel listed may not always be obtainable by transient civil pilots. Confirmation of availability of fuel should be made directly with fuel suppliers at locations where refueling is planned.

# 15 OXYGEN—CIVIL

OX 1 High Pressure OX 3 High Pressure—Replacement Bottles
OX 2 Low Pressure OX 4 Low Pressure—Replacement Bottles

# 16 TRAFFIC PATTERN ALTITUDE

Traffic Pattern Altitude (TPA)—The first figure shown is TPA above mean sea level. The second figure in parentheses is TPA above airport elevation. Multiple TPA shall be shown as "TPA—See Remarks" and detailed information shall be shown in the Airport or Military Remarks Section. Traffic pattern data for USAF bases, USN facilities, and U.S. Army airports (including those on which ACC or U.S. Army is a tenant) that deviate from standard pattern altitudes shall be shown in Military Remarks.

<sup>\*\*(</sup>Freeze Point)

# 17

#### AIRPORT OF ENTRY. LANDING RIGHTS. AND CUSTOMS USER FEE AIRPORTS

U.S. CUSTOMS USER FEE AIRPORT—Private Aircraft operators are frequently required to pay the costs associated with customs processing.

AOE—Airport of Entry. A customs Airport of Entry where permission from U.S. Customs is not required to land. However, at least one hour advance notice of arrival is required.

LRA—Landing Rights Airport. Application for permission to land must be submitted in advance to U.S. Customs. At least one hour advance notice of arrival is required.

NOTE: Advance notice of arrival at both an AOE and LRA airport may be included in the flight plan when filed in Canada or Mexico. Where Flight Notification Service (ADCUS) is available the airport remark will indicate this service. This notice will also be treated as an application for permission to land in the case of an LRA. Although advance notice of arrival may be relayed to Customs through Mexico, Canada, and U.S. Communications facilities by flight plan, the aircraft operator is solely responsible for ensuring that Customs receives the notification. (See Customs, Immigration and Naturalization, Public Health and Agriculture Department requirements in the International Flight Information Manual for further details.)

US Customs Air and Sea Ports, Inspectors and Agents

Northeast Sector (New England and Atlantic States—ME to MD)	407-975-1740
Southeast Sector (Atlantic States—DC, WV, VA to FL)	407-975-1780
Central Sector (Interior of the US, including Gulf states—MS, AL, LA)	407-975-1760
Southwest East Sector (OK and eastern TX)	407-975-1840
Southwest West Sector (Western TX, NM and AZ)	407-975-1820
Pacific Sector (WA, OR, CA, HI and AK)	407-975-1800

# (18) CERTIFICATED AIRPORT (14 CFR PART 139)

Airports serving Department of Transportation certified carriers and certified under 14 CFR part 139 are indicated by the Class and the ARFF Index; e.g. Class I, ARFF Index A, which relates to the availability of crash, fire, rescue equipment. Class I airports can have an ARFF Index A through E, depending on the aircraft length and scheduled departures. Class II, III, and IV will always carry an Index A.

# 14 CFR PART 139 CERTIFICATED AIRPORTS AIRPORT CLASSIFICATIONS

Type of Air Carrier Operation	Class I	Class II	Class III	Class IV
Scheduled Air Carrier Aircraft with 31 or more passenger seats	Х			
Unscheduled Air Carrier Aircraft with 31 or more passengers seats	Х	Х		Х
Scheduled Air Carrier Aircraft with 10 to 30 passenger seats	Х	Х	Х	

### 14 CFR-PART 139 CERTIFICATED AIRPORTS

#### INDICES AND AIRCRAFT RESCUE AND FIRE FIGHTING EQUIPMENT REQUIREMENTS

Airport Index	Required No. Vehicles	Aircraft Length	Scheduled Departures	Agent + Water for Foam
А	1	<90′	≥1	500#DC or HALON 1211 or 450#DC + 100 gal H₂O
В	1 or 2	≥90′, <126′	≥5	Index A + 1500 gal H <sub>2</sub> O
		≥126′, <159′	<5	
С	2 or 3	≥126′, <159′	≥5	Index A + 3000 gal H <sub>2</sub> O
		≥159′, <200′	<5	
D	3	≥159′, <200′		Index A + 4000 gal H <sub>2</sub> O
		>200′	<5	
E	3	≥200′	≥5	Index A + 6000 gal H <sub>2</sub> O

<sup>&</sup>gt; Greater Than; < Less Than; ≥ Equal or Greater Than; ≤ Equal or Less Than; H<sub>2</sub>O-Water; DC-Dry Chemical.

NOTE: The listing of ARFF index does not necessarily assure coverage for non-air carrier operations or at other than prescribed times for air carrier. ARFF Index Ltd.—indicates ARFF coverage may or may not be available, for information contact airport manager prior to flight.

# 19 NOTAM SERVICE

All public use landing areas are provided NOTAM "D" (distant dissemination) and NOTAM "L" (local dissemination) service. Airport NOTAM file identifier is shown for individual airports, e.g. "NOTAM FILE IAD". See AIM, Basic Flight Information and

ATC Procedures for detailed description of NOTAM's. Current NOTAMs are available from Flight Service Stations at 1–800–WX–BRIEF. Real time Military NOTAMs are available using the DoD Internet NOTAM Distribution System (DINS) www.notams.jcs.mil.

# 20 FAA INSPECTION

All airports not inspected by FAA will be identified by the note: Not insp. This indicates that the airport information has been provided by the owner or operator of the field.

# **21** RUNWAY DATA

Runway information is shown on two lines. That information common to the entire runway is shown on the first line while information concerning the runway ends is shown on the second or following line. Runway direction, surface, length, width, weight bearing capacity, lighting, and slope, when available are shown for each runway. Multiple runways are shown with the longest runway first. Direction, length, width, and lighting are shown for sea-lanes. The full dimensions of helipads are shown, e.g., 50X150. Runway data that requires clarification will be placed in the remarks section.

#### RUNWAY DESIGNATION

Runways are normally numbered in relation to their magnetic orientation rounded off to the nearest 10 degrees. Parallel runways can be designated L (left)/R (right)/C (center). Runways may be designated as Ultralight or assault strips. Assault | strips are shown by magnetic bearing.

#### RUNWAY DIMENSIONS

Runway length and width are shown in feet. Length shown is runway end to end including displaced thresholds, but excluding those areas designed as overruns.

#### RUNWAY SURFACE AND LENGTH

Runway lengths prefixed by the letter "H" indicate that the runways are hard surfaced (concrete, asphalt, or part asphalt–concrete). If the runway length is not prefixed, the surface is sod, clay, etc. The runway surface composition is indicated in parentheses after runway length as follows:

(AFSC)—Aggregate friction seal coat	(GRVL)—Gravel, or cinders	(PSP)—Pierced steel plank
(ASPH)—Asphalt	(MATS)—Pierced steel planking,	(RFSC)—Rubberized friction seal coat
(CONC)—Concrete	landing mats, membranes	(TURF)—Turf
(DIRT)—Dirt	(PEM)—Part concrete, part asphalt	(TRTD)—Treated
(GRVD)—Grooved	(PFC)—Porous friction courses	(WC)—Wire combed

#### RUNWAY WEIGHT REARING CAPACITY

Runway strength data shown in this publication is derived from available information and is a realistic estimate of capability at an average level of activity. It is not intended as a maximum allowable weight or as an operating limitation. Many airport pavements are capable of supporting limited operations with gross weights in excess of the published figures. Permissible operating weights, insofar as runway strengths are concerned, are a matter of agreement between the owner and user. When desiring to operate into any airport at weights in excess of those published in the publication, users should contact the airport management for permission. Runway strength figures are shown in thousand of pounds, with the last three figures being omitted. Add 000 to figure following S, D, 2S, 2T, AUW, SWL, etc., for gross weight capacity. A blank space following the letter designator is used to indicate the runway can sustain aircraft with this type landing gear, although definite runway weight bearing capacity figures are not available, e.g., S, D. Applicable codes for typical gear configurations with S=Single, D=Dual, T=Triple and Q=Quadruple:

CURRENT	NEW	NEW DESCRIPTION
S	S	Single wheel type landing gear (DC3), (C47), (F15), etc.
D	D	Dual wheel type landing gear (BE1900), (B737), (A319), etc.
T	D	Dual wheel type landing gear (P3, C9).
ST	2S	Two single wheels in tandem type landing gear (C130).
TRT	2T	Two triple wheels in tandem type landing gear (C17), etc.
DT	2D	Two dual wheels in tandem type landing gear (B707), etc.
TT	2D	Two dual wheels in tandem type landing gear (B757,
		KC135).
SBTT	2D/D1	Two dual wheels in tandem/dual wheel body gear type
		landing gear (KC10).
None	2D/2D1	Two dual wheels in tandem/two dual wheels in tandem body
		gear type landing gear (A340–600).
DDT	2D/2D2	Two dual wheels in tandem/two dual wheels in double
		tandem body gear type landing gear (B747, E4).
TTT	3D	Three dual wheels in tandem type landing gear (B777), etc.
TT	D2	Dual wheel gear two struts per side main gear type landing
		gear (B52).
TDT	C5	Complex dual wheel and quadruple wheel combination
		landing gear (C5).

AUW—All up weight. Maximum weight bearing capacity for any aircraft irrespective of landing gear configuration.

SWL—Single Wheel Loading. (This includes information submitted in terms of Equivalent Single Wheel Loading (ESWL) and Single Isolated Wheel Loading).

PSI—Pounds per square inch. PSI is the actual figure expressing maximum pounds per square inch runway will support, e.g., (SWL 000/PSI 535).

Omission of weight bearing capacity indicates information unknown.

The ACN/PCN System is the ICAO standard method of reporting pavement strength for pavements with bearing strengths greater than 12,500 pounds. The Pavement Classification Number (PCN) is established by an engineering assessment of the runway. The PCN is for use in conjunction with an Aircraft Classification Number (ACN). Consult the Aircraft Flight Manual, Flight Information Handbook, or other appropriate source for ACN tables or charts. Currently, ACN data may not be available for all aircraft. If an ACN table or chart is available, the ACN can be calculated by taking into account the aircraft weight, the pavement type, and the subgrade category. For runways that have been evaluated under the ACN/PCN system, the PCN will be shown as a five-part code (e.g. PCN 80 R/B/W/T). Details of the coded format are as follows:

- (1) The PCN NUMBER—The reported PCN indicates that an aircraft with an ACN equal or less than the reported PCN can operate on the pavement subject to any limitation on the tire pressure.
- (2) The type of pavement:
  - R Rigid
  - F Flexible
- (3) The pavement subgrade category:
  - A High
  - B Medium
  - C Low
  - D Ultra-low

- $\begin{tabular}{ll} (4) The maximum tire pressure authorized for the pavement: \\ \end{tabular}$ 
  - W High, no limit
  - X Medium, limited to 217 psi
  - Y Low, limited to 145 psi
  - Z Very low, limited to 73 psi
- (5) Pavement evaluation method:T Technical evaluation
  - U By experience of aircraft using the pavement

NOTE: Prior permission from the airport controlling authority is required when the ACN of the aircraft exceeds the published PCN or aircraft tire pressure exceeds the published limits.

#### RUNWAY LIGHTING

Lights are in operation sunset to sunrise. Lighting available by prior arrangement only or operating part of the night and/or pilot controlled lighting with specific operating hours are indicated under airport or military remarks. At USN/USMC facilities lights are available only during airport hours of operation. Since obstructions are usually lighted, obstruction lighting is not included in this code. Unlighted obstructions on or surrounding an airport will be noted in airport or military remarks. Runway lights nonstandard (NSTD) are systems for which the light fixtures are not FAA approved L-800 series: color, intensity, or spacing does not meet FAA standards. Nonstandard runway lights, VASI, or any other system not listed below will be shown in airport remarks or military service. Temporary, emergency or limited runway edge lighting such as flares, smudge pots, lanterns or portable runway lights will also be shown in airport remarks or military service. Types of lighting are shown with the runway or runway end they serve.

NSTD—Light system fails to meet FAA standards.

LIRL—Low Intensity Runway Lights.

MIRL—Medium Intensity Runway Lights.

HIRL—High Intensity Runway Lights.

RAIL—Runway Alignment Indicator Lights.

REIL—Runway End Identifier Lights.

CL—Centerline Lights.

TDZL-Touchdown Zone Lights.

ODALS-Omni Directional Approach Lighting System.

AF OVRN-Air Force Overrun 1000' Standard

Approach Lighting System.

LDIN-Lead-In Lighting System.

MALS-Medium Intensity Approach Lighting System.

MALSF—Medium Intensity Approach Lighting System with Sequenced Flashing Lights.

MALSR—Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights.

SALS-Short Approach Lighting System.

SALSF—Short Approach Lighting System with Sequenced Flashing Lights.

SSALS—Simplified Short Approach Lighting System.

SSALF—Simplified Short Approach Lighting System with Sequenced Flashing Lights.

SSALR—Simplified Short Approach Lighting System with Runway Alignment Indicator Lights.

ALSAF—High Intensity Approach Lighting System with Sequenced Flashing Lights.

ALSF1—High Intensity Approach Lighting System with Sequenced Flashing Lights, Category I, Configuration.

ALSF2—High Intensity Approach Lighting System with Sequenced Flashing Lights, Category II, Configuration.

SF-Sequenced Flashing Lights.

OLS-Optical Landing System.

WAVE-OFF.

NOTE: Civil ALSF2 may be operated as SSALR during favorable weather conditions. When runway edge lights are positioned more than 10 feet from the edge of the usable runway surface a remark will be added in the "Remarks" portion of the airport entry. This is applicable to Air Force, Air National Guard and Air Force Reserve Bases, and those joint civil/military airfields on which they are tenants.

#### VISUAL GLIDESLOPE INDICATORS

APAP—A system of panels, which may or may not be lighted, used for alignment of approach path.								
PNIL	APAP on left side of runway	PNIR	APAP on right side of runway					
PAPI—Preci	sion Approach Path Indicator							
P2L	2-identical light units placed on left side of	P4L	4-identical light units placed on left side of					
	runway		runway					
P2R	2-identical light units placed on right side of	P4R	4-identical light units placed on right side of					
	runway		runway					
PVASI—Pulsating/steady burning visual approach slope indicator, normally a single light unit projecting two colors.								
PSIL PVASI on left side of runway PSIR PVASI on right side of runway								
SAVASI—Simplified Abbreviated Visual Approach Slope Indicator								

S2R

2-box SAVASI on right side of runway

TRCV—Tri-color visual approach slope indicator, normally a single light unit projecting three colors.

2-box SAVASI on left side of runway

TRIL	TRCV on left side of runway	TRIR	TRCV on right side of runway
VASI—Visua	al Approach Slope Indicator		
V2L	2-box VASI on left side of runway	V6L	6-box VASI on left side of runway
V2R	2-box VASI on right side of runway	V6R	6-box VASI on right side of runway
V4L	4-box VASI on left side of runway	V12	12-box VASI on both sides of runway
V4R	4-box VASI on right side of runway	V16	16-box VASI on both sides of runway

NOTE: Approach slope angle and threshold crossing height will be shown when available; i.e., -GA 3.5° TCH 37'.

#### PILOT CONTROL OF AIRPORT LIGHTING

Key Mike	Function
7 times within 5 seconds	Highest intensity available
5 times within 5 seconds	Medium or lower intensity (Lower REIL or REIL-Off)
3 times within 5 seconds	Lowest intensity available
	(Lower REIL or REIL-Off)

Available systems will be indicated in the airport or military remarks, e.g., ACTIVATE HIRL Rwy 07–25, MALSR Rwy 07, and VASI Rwy 07—122.8.

Where the airport is not served by an instrument approach procedure and/or has an independent type system of different specification installed by the airport sponsor, descriptions of the type lights, method of control, and operating frequency will be explained in clear text. See AIM, "Basic Flight Information and ATC Procedures," for detailed description of pilot control of airport lighting.

RUNWAY SLOPE

When available, runway slope data will only be provided for those airports with an approved FAA instrument approach procedure. Runway slope will be shown only when it is 0.3 percent or greater. On runways less than 8000 feet, the direction of the slope up will be indicated, e.g., 0.3% up NW. On runways 8000 feet or greater, the slope will be shown (up or down) on the runway end line, e.g., RWY 13: 0.3% up., RWY 21: Pole. Rgt tfc. 0.4% down.

#### RUNWAY END DATA

Information pertaining to the runway approach end such as approach lights, touchdown zone lights, runway end identification lights, visual glideslope indicators, displaced thresholds, controlling obstruction, and right hand traffic pattern, will be shown on the specific runway end. "Rgt tfc"—Right traffic indicates right turns should be made on landing and takeoff for specified runway end.

#### LAND AND HOLD SHORT OPERATIONS (LAHSO)

LAHSO is an acronym for "Land and Hold Short Operations." These operations include landing and holding short of an intersection runway, an intersecting taxiway, or other predetermined points on the runway other than a runway or taxiway. Measured distance represents the available landing distance on the landing runway, in feet.

Specific questions regarding these distances should be referred to the air traffic manager of the facility concerned. The Aeronautical Information Manual contains specific details on hold–short operations and markings.

#### RUNWAY DECLARED DISTANCE INFORMATION

TORA—Take-off Run Available. The length of runway declared available and suitable for the ground run of an aeroplane take-off

TODA—Take-off Distance Available. The length of the take-off run available plus the length of the clearway, if provided.

ASDA—Accelerate-Stop Distance Available. The length of the take-off run available plus the length of the stopway, if provided. LDA—Landing Distance Available. The length of runway which is declared available and suitable for the ground run of an aeroplane landing.

# (22) ARRESTING GEAR/SYSTEMS

Arresting gear is shown as it is located on the runway. The a–gear distance from the end of the appropriate runway (or into the overrun) is indicated in parentheses. A–Gear which has a bi–direction capability and can be utilized for emergency approach end engagement is indicated by a (B). The direction of engaging device is indicated by an arrow. Up to 15 minutes advance notice may be required for rigging A–Gear for approach and engagement. Airport listing may show availability of other than US Systems. This information is provided for emergency requirements only. Refer to current aircraft operating manuals for specific engagement weight and speed criteria based on aircraft structural restrictions and arresting system limitations.

Following is a list of current systems referenced in this publication identified by both Air Force and Navy terminology:

BI-DIRECTIONAL CABLE (B)

12

<u>TYPE</u> <u>DESCRIPTION</u>

BAK-9 Rotary friction brake.

BAK-12A Standard BAK-12 with 950 foot run out, 1-inch cable and 40,000 pound weight setting. Rotary

friction brake.

BAK-12B Extended BAK-12 with 1200 foot run, 11/4 inch Cable and 50,000 pounds weight setting. Rotary

friction brake.

E28 Rotary Hydraulic (Water Brake).
M21 Rotary Hydraulic (Water Brake) Mobile.

The following device is used in conjunction with some aircraft arresting systems:

BAK-14 A device that raises a hook cable out of a slot in the runway surface and is remotely positioned

for engagement by the tower on request. (In addition to personnel reaction time, the system

requires up to five seconds to fully raise the cable.)

H A device that raises a hook cable out of a slot in the runway surface and is remotely positioned

for engagement by the tower on request. (In addition to personnel reaction time, the system

requires up to one and one-half seconds to fully raise the cable.)

UNI-DIRECTIONAL CABLE

TYPE DESCRIPTION

MB60 Textile brake—an emergency one-time use, modular braking system employing the tearing of

specially woven textile straps to absorb the kinetic energy.

E5/E5-1/E5-3 Chain Type. At USN/USMC stations E-5 A-GEAR systems are rated, e.g., E-5 RATING-13R-1100

HW (DRY), 31L/R-1200 STD (WET). This rating is a function of the A-GEAR chain weight and length and is used to determine the maximum aircraft engaging speed. A dry rating applies to a stabilized surface (dry or wet) while a wet rating takes into account the amount (if any) of wet overrun that is not capable of withstanding the aircraft weight. These ratings are published under

Military Service.

FOREIGN CABLE

TYPE DESCRIPTION US EQUIVALENT

44B–3H Rotary Hydraulic) (Water Brake)

CHAG Chain E-5

UNI-DIRECTIONAL BARRIER

TYPE DESCRIPTION

MA-1A Web barrier between stanchions attached to a chain energy absorber.

BAK-15 Web barrier between stanchions attached to an energy absorber (water squeezer, rotary friction,

chain). Designed for wing engagement.

NOTE: Landing short of the runway threshold on a runway with a BAK–15 in the underrun is a significant hazard. The barrier in the down position still protrudes several inches above the underrun. Aircraft contact with the barrier short of the runway threshold can cause damage to the barrier and substantial damage to the aircraft.

OTHER

TYPE DESCRIPTION

EMAS Engineered Material Arresting System, located beyond the departure end of the runway, consisting of

high energy absorbing materials which will crush under the weight of an aircraft.

# 23 MILITARY SERVICE

Specific military services available at the airport are listed under this general heading. Remarks applicable to any military service are shown in the individual service listing.

# (24) JET AIRCRAFT STARTING UNITS (JASU)

The numeral preceding the type of unit indicates the number of units available. The absence of the numeral indicates ten or more units available. If the number of units is unknown, the number one will be shown. Absence of JASU designation indicates non-availability.

The following is a list of current JASU systems referenced in this publication:

USAF JASU (For variations in technical data, refer to T.O. 35–1–7.)

**ELECTRICAL STARTING UNITS:** 

A/M32A-86 AC: 115/200v, 3 phase, 90 kva, 0.8 pf, 4 wire

DC: 28v, 1500 amp, 72 kw (with TR pack)

MC-1A AC: 115/208v, 400 cycle, 3 phase, 37.5 kva, 0.8 pf, 108 amp, 4 wire

DC: 28v, 500 amp, 14 kw

MD-3 AC: 115/208v, 400 cycle, 3 phase, 60 kva, 0.75 pf, 4 wire

DC: 28v, 1500 amp, 45 kw, split bus

MD-3A AC: 115/208v, 400 cycle, 3 phase, 60 kva, 0.75 pf, 4 wire

DC: 28v, 1500 amp, 45 kw, split bus

MD-3M AC: 115/208v, 400 cycle, 3 phase, 60 kva, 0.75 pf, 4 wire

DC: 28v, 500 amp, 15 kw

AC: 120/208y, 400 cycle, 3 phase, 62.5 kya, 0.8 pf, 175 amp, "WYE" neutral ground, 4 wire, 120y, MD-4 400 cycle, 3 phase, 62.5 kva, 0.8 pf, 303 amp, "DELTA" 3 wire, 120v, 400 cycle, 1 phase, 62.5

kva. 0.8 pf. 520 amp. 2 wire

AIR STARTING UNITS

ΔM32-95 150 + -5 lb/min (2055 + -68 cfm) at 51 + -2 psiaAM32A-95 150 +/- 5 lb/min @ 49 +/- 2 psia (35 +/- 2 psig)

LASS 150 +/- 5 lb/min @ 49 +/- 2 psia

MA-1A 82 lb/min (1123 cfm) at 130° air inlet temp, 45 psia (min) air outlet press

MC-1 15 cfm, 3500 psia MC-1A 15 cfm, 3500 psia MC-2A 15 cfm, 200 psia

MC-11 8,000 cu in cap, 4000 psig, 15 cfm

COMBINED AIR AND ELECTRICAL STARTING UNITS:

AGPU AC: 115/200v, 400 cycle, 3 phase, 30 kw gen

DC: 28v, 700 amp

AIR: 60 lb/min @ 40 psig @ sea level

AM32A-60\* AIR: 120 + - 4 lb/min (1644 + - 55 cfm) at 49 + - 2 psia

AC: 120/208v, 400 cycle, 3 phase, 75 kva, 0.75 pf, 4 wire, 120v, 1 phase, 25 kva

DC: 28v, 500 amp, 15 kw

AIR: 150 + -5 lb/min (2055 + -68) cfm at 51 + -9 psia ΔM324-604

AC: 120/208v, 400 cycle, 3 phase, 75 kva, 0.75 pf, 4 wire DC: 28v. 200 amp. 5.6 kw

AM32A-60B\* AIR: 130 lb/min, 50 psia

AC: 120/208v, 400 cycle, 3 phase, 75 kva, 0.75 pf, 4 wire

DC: 28v, 200 amp, 5.6 kw

\*NOTE: During combined air and electrical loads, the pneumatic circuitry takes preference and will limit the amount of electrical power available.

USN IASU

FLECTRICAL STARTING UNITS:

NC-8A/A1 DC: 500 amp constant, 750 amp intermittent, 28v;

AC: 60 kva @ .8 pf, 115/200v, 3 phase, 400 Hz. NC-10A/A1/B/C DC: 750 amp constant, 1000 amp intermittent, 28v:

AC: 90 kva, 115/200v, 3 phase, 400 Hz.

AIR STARTING UNITS:

GTC-85/GTE-85 120 lbs/min @ 45 psi. MSU-200NAV/A/U47A-5 204 lbs/min @ 56 psia.

WELLS AIR START 180 lbs/min @ 75 psi or 120 lbs/min @ 45 psi. Simultaneous multiple start capability.

SYSTEM

COMBINED AIR AND ELECTRICAL STARTING UNITS:

NCPP-105/RCPT 180 lbs/min @ 75 psi or 120 lbs/min @ 45 psi. 700 amp, 28v DC. 120/208v, 400 Hz AC,

30 kva.

JASU (ARMY)

28v, 7.5 kw, 280 amp. 59R2-1R

ELECTRICAL STARTING UNITS (DND):

CF12 AC 115/200v, 140 kva, 400 Hz, 3 phase CF13 AC 115/200v, 60 kva, 400 Hz, 3 phase

CE14 AC/DC 115/200v, 140 kva, 400 Hz, 3 phase, 28vDC, 1500 amp CF15 DC 22-35v, 500 amp continuous 1100 amp intermittent CF16 DC 22-35v, 500 amp continuous 1100 amp intermittent soft start

AIR STARTING UNITS (DND):

ASA 45.5 psig, 116.4 lb/min COMBINED AIR AND ELECTRICAL STARTING UNITS (DND)

AC 120/208v, 60 kva, 400 Hz, 3 phase DC 28v, 75 amp CEA1

AIR 112.5 lb/min, 47 psig

ELECTRICAL STARTING UNITS (OTHER)

C-26 28v 45kw 115-200v 15kw 380-800 Hz 1 phase 2 wire

C-26-B, C-26-C 28v 45kw: Split Bus: 115-200v 15kw 380-800 Hz 1 phase 2 wire

DC 28v/10kw

AIR STARTING UNITS (OTHER):

40 psi/2 lb/sec (LPAS Mk12, Mk12L, Mk12A, Mk1, Mk2B) Α4

MA-1 150 Air HP, 115 lb/min 50 psia MA-2 250 Air HP, 150 lb/min 75 psia

CARTRIDGE:

MXU-4A USAF



Fuel available through US Military Base supply. DESC Into-Plane Contracts and/or reciprocal agreement is listed first and is followed by (Mil). At commercial airports where Into-Plane contracts are in place, the name of the refueling agent is shown. Military fuel should be used first if it is available. When military fuel cannot be obtained but Into-Plane contract fuel is available, Government aircraft must refuel with the contract fuel and applicable refueling agent to avoid any breach in contract terms and conditions. Fuel not available through the above is shown preceded by NC (no contract). When fuel is obtained from NC sources, local purchase procedures must be followed. The US Military Aircraft Identaplates DD Form 1896 (Jet Fuel), DD Form 1897 (Avgas) and AF Form 1245 (Avgas) are used at military installations only. The US Government Aviation Into-Plane Reimbursement (AIR) Card (currently issued by AVCARD) is the instrument to be used to obtain fuel under a DESC Into-Plane Contract and for NC purchases if the refueling agent at the commercial airport accepts the AVCARD. A current list of contract fuel locations is available online at www.desc.dla.mil/Static/ProductsAndServices.asp; click on the Commercial Airports

See legend item 14 for fuel code and description.

# (26) SUPPORTING FLUIDS AND SYSTEMS—MILITARY

ADI

Anti-Detonation Injection Fluid—Reciprocating Engine Aircraft.

W Water Thrust Augmentation-Jet Aircraft.

WAI Water-Alcohol Injection Type, Thrust Augmentation-Jet Aircraft.

Single Point Refueling. SP

PRESAIR Air Compressors rated 3,000 PSI or more.

Anti-icing/De-icing/Defrosting Fluid (MIL-A-8243). De-Ice

OXYGEN:

LPOX Low pressure oxygen servicing. HPOX High pressure oxygen servicing. IHOX Low and high pressure oxygen servicing.

 $I \cap X$ Liquid oxygen servicing.

OXRB Oxygen replacement bottles. (Maintained primarily at Naval stations for use in acft where oxygen can be

replenished only by replacement of cylinders.)

Indicates oxygen servicing when type of servicing is unknown.

NOTE: Combinations of above items is used to indicate complete oxygen servicing available:

**LHOXRB** Low and high pressure oxygen servicing and replacement bottles;

LPOXRR Low pressure oxygen replacement bottles only, etc.

NOTE: Aircraft will be serviced with oxygen procured under military specifications only. Aircraft will not be serviced with medical oxygen.

#### NITROGEN:

CODE

LPNIT — Low pressure nitrogen servicing. HPNIT — High pressure nitrogen servicing. LHNIT - Low and high pressure nitrogen servicing.

GRADE, TYPE

# (27) OIL-MILITARY

US AVIATION OILS (MIL SPECS):

0002	41.752, 1112
0-113	1065, Reciprocating Engine Oil (MIL-L-6082)
0-117	1100, Reciprocating Engine Oil (MIL-L-6082)
0-117+	1100, 0-117 plus cyclohexanone (MIL-L-6082)
0-123	1065, (Dispersant), Reciprocating Engine Oil (MIL-L-22851 Type III)
0-128	1100, (Dispersant), Reciprocating Engine Oil (MIL-L-22851 Type II)
0-132	1005, Jet Engine Oil (MIL-L-6081)
0-133	1010, Jet Engine Oil (MIL-L-6081)
0-147	None, MIL-L-6085A Lubricating Oil, Instrument, Synthetic
0-148	None, MIL-L-7808 (Synthetic Base) Turbine Engine Oil
0-149	None, Aircraft Turbine Engine Synthetic, 7.5c St
0-155	None, MIL-L-6086C, Aircraft, Medium Grade
0-156	None, MIL-L-23699 (Synthetic Base), Turboprop and Turboshaft Engines

JOAP/SOAP Joint Oil Analysis Program. JOAP support is furnished during normal duty hours, other times on request.

(JOAP and SOAP programs provide essentially the same service, JOAP is now the standard joint service

supported program.)

# (28) TRANSIENT ALERT (TRAN ALERT)—MILITARY

Tran Alert service is considered to include all services required for normal aircraft turn-around, e.g., servicing (fuel, oil, oxygen, etc.), debriefing to determine requirements for maintenance, minor maintenance, inspection and parking assistance of transient aircraft. Drag chute repack, specialized maintenance, or extensive repairs will be provided within the capabilities and priorities of the base. Delays can be anticipated after normal duty hours/holidays/weekends regardless of the hours of transient maintenance operation. Pilots should not expect aircraft to be serviced for TURN-AROUNDS during time periods when servicing or maintenance manpower is not available. In the case of airports not operated exclusively by US military, the servicing indicated by the remarks will not always be available for US military

aircraft. When transient alert services are not shown, facilities are unknown. NO PRIORITY BASIS—means that transient alert services will be provided only after all the requirements for mission/tactical assigned aircraft have been accomplished.

# (29) AIRPORT REMARKS

The Attendance Schedule is the months, days and hours the airport is actually attended. Airport attendance does not mean watchman duties or telephone accessibility, but rather an attendant or operator on duty to provide at least minimum services (e.g., repairs, fuel, transportation).

Airport Remarks have been grouped in order of applicability. Airport remarks are limited to those items of information that are determined essential for operational use, i.e., conditions of a permanent or indefinite nature and conditions that will remain in effect for more than 30 days concerning aeronautical facilities, services, maintenance available, procedures or hazards, knowledge of which is essential for safe and efficient operation of aircraft. Information concerning permanent closing of a runway or taxiway will not be shown. A note "See Special Notices" shall be applied within this remarks section when a special notice applicable to the entry is contained in the Special Notices section of this publication.

Parachute Jumping indicates parachute jumping areas associated with the airport. See Parachute Jumping Area section of this publication for additional Information.

Landing Fee indicates landing charges for private or non-revenue producing aircraft. In addition, fees may be charged for planes that remain over a couple of hours and buy no services, or at major airline terminals for all aircraft.

Note: Unless otherwise stated, remarks including runway ends refer to the runway's approach end.

# **30** MILITARY REMARKS

Military Remarks published at a joint Civil/Military facility are remarks that are applicable to the Military. At Military Facilities all remarks will be published under the heading Military Remarks. Remarks contained in this section may not be applicable to civil users. The first group of remarks is applicable to the primary operator of the airport. Remarks applicable to a tenant on the airport are shown preceded by the tenant organization, i.e., (A) (AF) (N) (ANG), etc. Military airports operate 24 hours unless otherwise specified. Airport operating hours are listed first (airport operating hours will only be listed if they are different than the airport attended hours or if the attended hours are unavailable) followed by pertinent remarks in order of applicability. Remarks will include information on restrictions, hazards, traffic pattern, noise abatement, customs/agriculture/immigration, and miscellaneous information applicable to the Military.

#### Type of restrictions:

CLOSED: When designated closed, the airport is restricted from use by all aircraft unless stated otherwise. Any closure applying to specific type of aircraft or operation will be so stated. USN/USMC/USAF airports are considered closed during non-operating hours. Closed airports may be utilized during an emergency provided there is a safe landing area.

OFFICIAL BUSINESS ONLY: The airfield is closed to all transient military aircraft for obtaining routine services such as fueling, passenger drop off or pickup, practice approaches, parking, etc. The airfield may be used by aircraws and aircraft if official government business (including civilian) must be conducted on or near the airfield and prior permission is received from the airfield manager.

AF OFFICIAL BUSINESS ONLY OR NAVY OFFICIAL BUSINESS ONLY: Indicates that the restriction applies only to service indicated.

PRIOR PERMISSION REQUIRED (PPR): Airport is closed to transient aircraft unless approval for operation is obtained from the appropriate commander through Chief, Airfield Management or Airfield Operations Officer. Official Business or PPR does not preclude the use of US Military airports as an alternate for IFR flights. If a non-US military airport is used as a weather alternate and requires a PPR, the PPR must be requested and confirmed before the flight departs. The purpose of PPR is to control volume and flow of traffic rather than to prohibit it. Prior permission is required for all aircraft requiring transient alert service outside the published transient alert duty hours. All aircraft carrying hazardous materials must obtain prior permission as outlined in AFJI 11–204, AR 95–27, OPNAVINST 3710.7.

Note: OFFICIAL BUSINESS ONLY AND PPR restrictions are not applicable to Special Air Mission (SAM) or Special Air Resource (SPAR) aircraft providing person or persons on aboard are designated Code 6 or higher as explained in AFJMAN 11–213, AR 95–11, OPNAVINST 3722–8J. Official Business Only or PPR do not preclude the use of the airport as an alternate for IFR flights.

# 31) WEATHER DATA SOURCES

Weather data sources will be listed alphabetically followed by their assigned frequencies and/or telephone number and hours of operation.

ASOS—Automated Surface Observing System. Reports the same as an AWOS-3 plus precipitation identification and intensity, and freezing rain occurrence (future enhancement).

AWOS-Automated Weather Observing System

AWOS-A—reports altimeter setting (all other information is advisory only).

AWOS-1—reports altimeter setting, wind data and usually temperature, dewpoint and density altitude.

AWOS-2-reports the same as AWOS-1 plus visibility.

AWOS-3—reports the same as AWOS-1 plus visibility and cloud/ceiling data.

See AIM, Basic Flight Information and ATC Procedures for detailed description of AWOS.

HIWAS—See RADIO AIDS TO NAVIGATION

LAWRS—Limited Aviation Weather Reporting Station where observers report cloud height, weather, obstructions to vision, temperature and devipoint (in most cases), surface wind, altimeter and pertinent remarks.

LLWAS—indicates a Low Level Wind Shear Alert System consisting of a center field and several field perimeter anemometers. SAWRS—identifies airports that have a Supplemental Aviation Weather Reporting Station available to pilots for current weather information.

SWSL—Supplemental Weather Service Location providing current local weather information via radio and telephone.

TDWR—indicates airports that have Terminal Doppler Weather Radar.

WSP-indicates airports that have Weather System Processor.

When the automated weather source is broadcast over an associated airport NAVAID frequency (see NAVAID line), it shall be indicated by a bold ASOS, AWOS, or HIWAS followed by the frequency, identifier and phone number, if available.



Airport terminal control facilities and radio communications associated with the airport shall be shown. When the call sign is not the same as the airport name the call sign will be shown. Frequencies shall normally be shown in descending order with the primary frequency listed first. Frequencies will be listed, together with sectorization indicated by outbound radials, and hours of operation. Communications will be listed in sequence as follows:

Single Frequency Approach (SFA), Common Traffic Advisory Frequency (CTAF), Automatic Terminal Information Service (ATIS) and Aeronautical Advisory Stations (UNICOM) or (AUNICOM) along with their frequency is shown, where available, on the line following the heading "COMMUNICATIONS." When the CTAF and UNICOM frequencies are the same, the frequency will be shown as CTAF/UNICOM 122.8.

The FSS telephone nationwide is toll free 1–800–WX–BRIEF (1–800–992–7433). When the FSS is located on the field it will be indicated as "on arpt". Frequencies available at the FSS will follow in descending order. Remote Communications Outlet (RCO) providing service to the airport followed by the frequency and FSS RADIO name will be shown when available.

FSS's provide information on airport conditions, radio aids and other facilities, and process flight plans. Airport Advisory Service (AAS) is provided on the CTAF by FSS's for select non-tower airports or airports where the tower is not in operation.

(See AIM, Para 4-1-9 Traffic Advisory Practices at Airports Without Operating Control Towers or AC 90-42C.)

Aviation weather briefing service is provided by FSS specialists. Flight and weather briefing services are also available by calling the telephone numbers listed.

Remote Communications Outlet (RCO)—An unmanned air/ground communications facility that is remotely controlled and provides UHF or VHF communications capability to extend the service range of an FSS.

Civil Communications Frequencies-Civil communications frequencies used in the FSS air/ground system are operated on 122.0, 122.2, 123.6; emergency 121.5; plus receive-only on 122.1.

- a. 122.0 is assigned as the Enroute Flight Advisory Service frequency at selected FSS RADIO outlets.
- b. 122.2 is assigned as a common enroute frequency.
- c. 123.6 is assigned as the airport advisory frequency at select non-tower locations. At airports with a tower, FSS may provide airport advisories on the tower frequency when tower is closed.
- d. 122.1 is the primary receive-only frequency at VOR's.
- e. Some FSS's are assigned 50 kHz frequencies in the 122–126 MHz band (eg. 122.45). Pilots using the FSS A/G system should refer to this directory or appropriate charts to determine frequencies available at the FSS or remoted facility through which they wish to communicate.

Emergency frequency 121.5 and 243.0 are available at all Flight Service Stations, most Towers, Approach Control and RADAR facilities.

Frequencies published followed by the letter "T" or "R", indicate that the facility will only transmit or receive respectively on that frequency. All radio aids to navigation (NAVAID) frequencies are transmit only.

#### TERMINAL SERVICES

SFA—Single Frequency Approach.

CTAF—A program designed to get all vehicles and aircraft at airports without an operating control tower on a common frequency.

ATIS—A continuous broadcast of recorded non-control information in selected terminal areas.

D-ATIS—Digital ATIS provides ATIS information in text form outside the standard reception range of conventional ATIS via landline & data link communications and voice message within range of existing transmitters.

AUNICOM—Automated UNICOM is a computerized, command response system that provides automated weather, radio check capability and airport advisory information selected from an automated menu by microphone clicks.

UNICOM—A non-government air/ground radio communications facility which may provide airport information.

PTD—Pilot to Dispatcher.

APP CON—Approach Control. The symbol (R) indicates radar approach control.

TOWER—Control tower.

GCA—Ground Control Approach System.

GND CON—Ground Control.

GCO—Ground Communication Outlet—An unstaffed, remotely controlled, ground/ground communications facility. Pilots at uncontrolled airports may contact ATC and FSS via VHF to a telephone connection to obtain an instrument clearance or close a VFR or IFR flight plan. They may also get an updated weather briefing prior to takeoff. Pilots will use four "key clicks" on the

VHF radio to contact the appropriate ATC facility or six "key clicks" to contact the FSS. The GCO system is intended to be used only on the ground.

DEP CON—Departure Control. The symbol R indicates radar departure control.

CLNC DEL-Clearance Delivery.

PRE TAXI CLNC-Pre taxi clearance.

VFR ADVSY SVC—VFR Advisory Service. Service provided by Non-Radar Approach Control.

Advisory Service for VFR aircraft (upon a workload basis) ctc APP CON.

COMD POST—Command Post followed by the operator call sign in parenthesis.

PMSV—Pilot-to-Metro Service call sign, frequency and hours of operation, when full service is other than continuous.

PMSV installations at which weather observation service is available shall be indicated, following the frequency and/or

hours of operation as "Wx obsn svc 1900–0000Z‡" or "other times" may be used when no specific time is given. PMSV facilities manned by forecasters are considered "Full Service". PMSV facilities manned by weather observers are listed as "Limited Service".

OPS—Operations followed by the operator call sign in parenthesis.

CON

RANGE

FLT FLW-Flight Following

MEDIVAC

NOTE: Communication frequencies followed by the letter "X" indicate frequency available on request.

# 33 AIRSPACE

Information concerning Class B, C, and part-time D and E surface area airspace shall be published with effective times. Class D and E surface area airspace that is continuous as established by Rulemaking Docket will not be shown.

CLASS B-Radar Sequencing and Separation Service for all aircraft in CLASS B airspace.

CLASS C—Separation between IFR and VFR aircraft and sequencing of VFR arrivals to the primary airport.

TRSA—Radar Sequencing and Separation Service for participating VFR Aircraft within a Terminal Radar Service Area.

Class C, D, and E airspace described in this publication is that airspace usually consisting of a 5 NM radius core surface area that begins at the surface and extends upward to an altitude above the airport elevation (charted in MSL for Class C and Class D). Class E surface airspace normally extends from the surface up to but not including the overlying controlled airspace.

When part-time Class C or Class D airspace defaults to Class E, the core surface area becomes Class E. This will be formatted as:

AIRSPACE: CLASS C svc "times" ctc APP CON other times CLASS E:

0

AIRSPACE: CLASS D svc "times" other times CLASS E.

When a part-time Class C, Class D or Class E surface area defaults to Class G, the core surface area becomes Class G up to, but not including, the overlying controlled airspace. Normally, the overlying controlled airspace is Class E airspace beginning at either 700' or 1200' AGL. This will be formatted as:

 $\textbf{AIRSPACE: CLASS C} \text{ svc ''times'' ctc } \textbf{APP CON} \text{ other times CLASS G, with CLASS E 700' (or 1200') AGL \& abv: } \textbf{AGL } \textbf{APP CON} \textbf{AGL } \textbf{AGL$ 

0

AIRSPACE: CLASS D svc "times" other times CLASS G with CLASS E 700' (or 1200') AGL & abv:

٥r

AIRSPACE: CLASS E svc "times" other times CLASS G with CLASS E 700' (or 1200') AGL & abv.

NOTE: AIRSPACE SVC "TIMES" INCLUDE ALL ASSOCIATED ARRIVAL EXTENSIONS. Surface area arrival extensions for instrument approach procedures become part of the primary core surface area. These extensions may be either Class D or Class E airspace and are effective concurrent with the times of the primary core surface area. For example, when a part-time Class C, Class D or Class E surface area defaults to Class G, the associated arrival extensions will default to Class G at the same time. When a part-time Class C or Class D surface area defaults to Class E, the arrival extensions will remain in effect as Class E airspace.

NOTE: CLASS E AIRSPACE EXTENDING UPWARD FROM 700 FEET OR MORE ABOVE THE SURFACE, DESIGNATED IN CONJUNCTION WITH AN AIRPORT WITH AN APPROVED INSTRUMENT PROCEDURE.

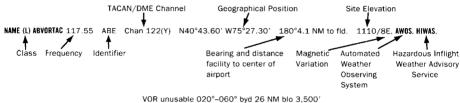
Class E 700′ AGL (shown as magenta vignette on sectional charts) and 1200′ AGL (blue vignette) areas are designated when necessary to provide controlled airspace for transitioning to/from the terminal and enroute environments. Unless otherwise specified, these 700′/1200′ AGL Class E airspace areas remain in effect continuously, regardless of airport operating hours or surface area status. These transition areas should not be confused with surface areas or arrival extensions.

(See Chapter 3, AIRSPACE, in the Aeronautical Information Manual for further details)



The Airport/Facility Directory lists, by facility name, all Radio Aids to Navigation that appear on National Aeronautical Charting Office Visual or IFR Aeronautical Charts and those upon which the FAA has approved an Instrument Approach Procedure, with exception of selected TACANs. Military TACAN information will be published for Military facilities contained in this publication. All VOR, VORTAC, TACAN, ILS and MLS equipment in the National Airspace System has an automatic monitoring and shutdown feature in the event of malfunction. Unmonitored, as used in this publication, for any navigational aid, means that monitoring personnel cannot observe the malfunction or shutdown signal. The NAVAID NOTAM file identifier will be shown as "NOTAM FILE IAD" and will be listed on the Radio Aids to Navigation line. When two or more NAVAIDS are listed and the NOTAM file identifier is different from that shown on the Radio Aids to Navigation line, it will be shown with the NAVAID listing. NOTAM file identifiers for ILSs and its components (e.g., NDB (LOM) are the same as the associated airports and are not repeated. Automated Surface Observing System (ASOS), Automated Weather Observing System (AWOS), and Hazardous Inflight Weather Advisory Service (HIWAS) will be shown when this service is broadcast over selected NAVAIDs.

NAVAID information is tabulated as indicated in the following sample:



Restriction within the normal altitude/range of the navigational aid (See primary alphabetical listing for restrictions on VORTAC and VOR/DME).

Note: Those DME channel numbers with a (Y) suffix require TACAN to be placed in the "Y" mode to receive distance information

HIWAS—Hazardous Inflight Weather Advisory Service is a continuous broadcast of inflight weather advisories including summarized SIGMETs, convective SIGMETs, AIRMETs and urgent PIREPs. HIWAS is presently broadcast over selected VOR's and will be implemented throughout the conterminous U.S.

ASR/PAR—Indicates that Surveillance (ASR) or Precision (PAR) radar instrument approach minimums are published in the U.S. Terminal Procedures. Only part-time hours of operation will be shown.

#### RADIO CLASS DESIGNATIONS

VOR/DME/TACAN Standard Service Volume (SSV) Classifications

SSV Class	Altitudes	Distance
		(NM)
(T) Terminal	1000' to 12,000'	25
(L) Low Altitude	1000' to 18,000'	40
(H) High Altitude	1000' to 14,500'	40
	14,500' to 18,000'	100
	18,000' to 45,000'	130
	45.000' to 60.000'	100

NOTE: Additionally, (H) facilities provide (L) and (T) service volume and (L) facilities provide (T) service. Altitudes are with respect to the station's site elevation. Coverage is not available in a cone of airspace directly above the facility.

#### CONTINUED ON NEXT PAGE

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The term VOR is, operationally, a general term covering the VHF omnidirectional bearing type of facility without regard to the fact that the power, the frequency protected service volume, the equipment configuration, and operational requirements may vary between facilities at different locations.

AB	Automatic Weather Broadcast.
DF	Direction Finding Service.
DME	
DME(Y)	
GS	Glide slope.
Н	Non-directional radio beacon (homing), power 50 watts to less than 2,000 watts (50 NM at all altitudes).
HH	Non-directional radio beacon (homing), power 2,000 watts or more (75 NM at all altitudes).
H-SAB	Non-directional radio beacons providing automatic transcribed weather service.
ILS	Instrument Landing System (voice, where available, on localizer channel).
IM	Inner marker.
ISMLS	Interim Standard Microwave Landing System.
LDA	Localizer Directional Aid.
LMM	Compass locator station when installed at middle marker site (15 NM at all altitudes).
LOM	Compass locator station when installed at outer marker site (15 NM at all altitudes).
MH	Non-directional radio beacon (homing) power less than 50 watts (25 NM at all altitudes).
MLS	Microwave Landing System.
MM	Middle marker.
OM	Outer marker.
S	Simultaneous range homing signal and/or voice.
SABH	Non-directional radio beacon not authorized for IFR or ATC. Provides automatic weather broadcasts.
SDF	Simplified Direction Facility.
TACAN	UHF navigational facility-omnidirectional course and distance information.
VOR	VHF navigational facility-omnidirectional course only.
VOR/DME	Collocated VOR navigational facility and UHF standard distance measuring equipment.
VORTAC	Collocated VOR and TACAN navigational facilities.
W	Without voice on radio facility frequency.
Z	VHF station location marker at a LF radio facility.

#### ILS FACILITY PEFORMANCE CLASSIFICATION CODES

Codes define the ability of an ILS to support autoland operations. The two portions of the code represent Official Category and farthest point along a Category I, II, or III approach that the Localizer meets Category III structure tolerances.

Official Category: I, II, or III; the lowest minima on published or unpublished procedures supported by the ILS.

Farthest point of satisfactory Category III Localizer performance for Category I, II, or III approaches: A-4 NM prior to runway threshold, B-3500 ft prior to runway threshold, C-glide angle dependent but generally 750–1000 ft prior to threshold, T-runway threshold, D-3000 ft after runway threshold, and E-2000 ft prior to stop end of runway.

ILS information is tabulated as indicated in the following sample:



#### FREQUENCY PAIRING PLAN AND MLS CHANNELING

I REGISTROI I ARRIVA I EAR ARD INES CHARREETTA								
MLS	VHF	TACAN	MLS	VHF	TACAN	MLS	VHF	TACAN
CHANNEL	FREQUENCY	CHANNEL	CHANNEL	FREQUENCY	CHANNEL	CHANNEL	FREQUENCY	CHANNEL
500	108.10	18X	568	109.45	31Y	636	114.15	88Y
502	108.30	20X	570	109.55	32Y	638	114.25	89Y
504	108.50	22X	572	109.65	33Y	640	114.35	90Y
506	108.70	24X	574	109.75	34Y	642	114.45	91Y
508	108.90	26X	576	109.85	35Y	644	114.55	92Y
510	109.10	28X	578	109.95	36Y	646	114.65	93Y
512	109.30	30X	580	110.05	37Y	648	114.75	94Y
514	109.50	32X	582	110.15	38Y	650	114.85	95Y
516	109.70	34X	584	110.25	39Y	652	114.95	96Y
518	109.90	36X	586	110.35	40Y	654	115.05	97Y
520	110.10	38X	588	110.45	41Y	656	115.15	98Y
522	110.30	40X	590	110.55	42Y	658	115.25	99Y
524	110.50	42X	592	110.65	43Y	660	115.35	100Y
526	110.70	44X	594	110.75	44Y	662	115.45	101Y
528	110.90	46X	596	110.85	45Y	664	115.55	102Y
530	111.10	48X	598	110.95	46Y	666	115.65	103Y
532	111.30	50X	600	111.05	47Y	668	115.75	104Y
534	111.50	52X	602	111.15	48Y	670	115.85	105Y
536	111.70	54X	604	111.25	49Y	672	115.95	106Y
538	111.90	56X	606	111.35	50Y	674	116.05	107Y
540	108.05	17Y	608	111.45	51Y	676	116.15	108Y
542	108.15	18Y	610	111.55	52Y	678	116.25	109Y
544	108.25	19Y	612	111.65	53Y	680	116.35	110Y
546	108.35	20Y	614	111.75	54Y	682	116.45	111Y
548	108.45	21Y	616	111.85	55Y	684	116.55	112Y
550	108.55	22Y	618	111.95	56Y	686	116.65	113Y
552	108.65	23Y	620	113.35	80Y	688	116.75	114Y
554	108.75	24Y	622	113.45	81Y	690	116.85	115Y
556	108.85	25Y	624	113.55	82Y	692	116.95	116Y
558	108.95	26Y	626	113.65	83Y	694	117.05	117Y
560	109.05	27Y	628	113.75	84Y	696	117.15	118Y
562	109.15	28Y	630	113.85	85Y	698	117.25	119Y
564	109.25	29Y	632	113.95	86Y			
566	109.35	30Y	634	114.05	87Y			

#### FREQUENCY PAIRING PLAN AND MLS CHANNELING

The following is a list of paired VOR/ILS VHF frequencies with TACAN channels and MLS channels.

TACAN Channel	VHF Frequency	MLS Channel	TACAN Channel	VHF Frequency	MLS Channel	TACAN Channel	VHF Frequency	MLS Channel
		GHANNEL						GHANNEL
2X	134.5	-	19Y	108.25	544	25X	108.80	-
2Y	134.55	-	20X	108.30	502	25Y	108.85	556
11X	135.4	-	20Y	108.35	546	26X	108.90	508
11Y	135.45	-	21X	108.40	-	26Y	108.95	558
12X	135.5	-	21Y	108.45	548	27X	109.00	-
12Y	135.55	-	22X	108.50	504	27Y	109.05	560
17X	108.00	-	22Y	108.55	550	28X	109.10	510
17Y	108.05	540	23X	108.60	-	28Y	109.15	562
18X	108.10	500	23Y	108.65	552	29X	109.20	-
18Y	108.15	542	24X	108.70	506	29Y	109.25	564
19X	108.20	-	24Y	108.75	554	30X	109.30	512

30V 109.35 566 63X 133.60 . 95V 114.85 650 31X 109.40 . 63V 133.65 . 96X 114.90 652 32X 109.50 514 64V 133.75 . 96V 114.95 652 32X 109.55 570 66X 133.80 . 97V 115.05 654 33X 109.60 . 65V 133.85 . 98X 115.15 656 33X 109.60 . 65V 133.85 . 98X 115.15 656 34X 109.70 516 66V 133.95 . 98V 115.15 656 34X 109.70 516 66V 133.95 . 98V 115.20 . 34Y 109.75 574 67X 134.00 . 99Y 115.25 658 35X 109.80 . 67Y 134.05 . 100X 115.30 . 35Y 109.85 578 68X 134.15 . 100X 115.30 . 36X 109.95 518 68X 134.15 . 101X 115.40 . 36X 109.95 518 68X 134.15 . 101X 115.40 . 37Y 110.06 50 70V 112.35 . 101X 115.45 660 38X 110.10 520 70V 112.35 . 102X 115.65 664 38X 110.10 520 70V 112.35 . 102X 115.65 668 40X 110.30 522 72Y 112.50 . 104Y 115.75 668 40X 110.30 522 72Y 112.50 . 104Y 115.75 668 40X 110.30 522 72Y 112.50 . 104Y 115.75 668 40X 110.30 522 72Y 112.50 . 104Y 115.75 668 40X 110.30 522 72Y 112.50 . 104Y 115.75 668 40X 110.30 524 74Y 112.70 . 106Y 115.85 670 44X 110.40 . 73Y 112.60 . 105Y 115.85 670 44X 110.40 . 73Y 112.65 . 106X 115.90 . 74Y 112.65 . 106X 115.95 672 42X 110.50 594 77X 112.26 . 106Y 115.55 664 44X 110.30 524 74Y 112.75 . 107X 116.00 . 74Y 112.65 . 106X 115.95 672 42X 110.50 594 77X 112.80 . 106Y 115.85 670 44X 110.60 588 74X 112.70 . 106Y 115.85 670 44X 110.60 588 74X 112.70 . 106Y 115.85 670 44X 110.60 588 74X 112.70 . 106Y 115.95 672 42X 110.55 590 75X 112.80 . 107Y 116.05 674 44X 110.60 596 78X 113.10 . 110X 116.35 680 46X 110.80 596 78X 113.10 . 110X 116.35 680 46X 110.80 596 78X 113.15 . 110X 116.05 674 44X 110.60 508 80X 113.35 600 113X 116.60 . 640 55X 111.85 606 83X 113.15 . 110X 116.35 680 56X 110.80 596 78X 113.15 . 110X 116.35 680 56X 110.80 596 78X 113.15 . 110X 116.35 680 56X 110.80 596 78X 113.15 . 110X 116.35 680 56X 110.80 596 78X 113.15 . 110X 116.35 680 56X 110.80 596 78X 113.15 . 110X 116.35 680 57X 111.55 606 88X 113.80 . 117Y 116.55 688 58X 110.60 534 84Y 113.75 628 117X 117.00 . 560 56X 111.85 606 83X 113.80 . 117Y 116.05 694 57X 111.65 612 86X 113.80 . 111Y 117.55 698 51X 111.65 612 86X 113.80 . 111X 117	TACAN Channel	VHF Frequency	MLS Channel	TACAN Channel	VHF Frequency	MLS Channel	TACAN Channel	VHF Frequency	MLS Channel
31X         109.40         -         63Y         133.65         -         96X         114.95         62.22           32X         109.50         514         64Y         133.75         -         97X         115.00         -           32Y         109.55         570         66X         133.80         -         97Y         115.00         -           33X         109.65         572         66X         133.90         -         98Y         115.10         -           34X         109.75         574         67X         134.00         -         99Y         115.20         -           35X         109.85         576         66X         133.90         -         99Y         115.20         -           35X         109.85         576         66X         134.10         -         100Y         115.25         68           36X         109.85         576         66X         134.10         -         101Y         115.35         660           36X         109.95         578         66X         134.20         -         101Y         115.45         62           37X         110.05         580         70X         112.35 <td></td> <td></td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td>						-			
32Y 109.50 514 64Y 133.75 - 97X 115.00 654 32Y 109.55 570 65X 133.80 - 99X 115.15 654 33X 109.60 - 66Y 133.90 - 98Y 115.15 656 34X 109.70 516 66Y 133.95 - 99X 115.20 - 34X 109.75 574 67X 134.00 - 99Y 115.25 658 35X 109.80 - 67Y 134.05 - 100X 115.30 - 35Y 109.85 576 68X 134.10 - 100Y 115.35 660 36X 109.90 518 68Y 134.10 - 100Y 115.35 660 36X 109.90 518 68Y 134.10 - 101X 115.40 - 36Y 109.95 578 68X 134.20 - 101Y 115.45 662 37X 110.00 - 66Y 134.25 - 102X 115.50 - 37Y 110.05 580 70X 112.35 - 102X 115.50 664 38X 110.10 520 70Y 112.35 - 103X 115.60 - 38Y 110.15 582 71X 112.40 - 103Y 115.65 666 39X 110.20 - 71Y 112.45 - 104X 115.70 - 39Y 110.25 584 72X 112.50 - 104X 115.70 - 40X 110.30 522 72Y 112.55 - 105X 115.80 - 40X 110.30 522 72Y 112.55 - 105X 115.80 - 41X 110.40 - 73Y 112.60 - 105Y 115.85 670 41X 110.40 - 73Y 112.60 - 105Y 115.85 670 41X 110.40 - 73Y 112.60 - 105Y 115.85 672 42X 110.50 524 74Y 112.75 - 106X 115.90 - 42X 110.50 524 74Y 112.75 - 106X 115.90 - 43X 110.60 - 75Y 112.85 - 105X 115.80 - 44X 110.70 526 76Y 112.85 - 105X 115.80 - 44X 110.70 526 76Y 112.85 - 105X 115.80 - 44X 110.70 526 76Y 112.85 - 105X 115.80 - 44X 110.75 594 77X 113.00 - 105Y 115.85 672 44X 110.75 594 77X 113.00 - 105Y 116.65 674 44X 110.75 594 77X 113.00 - 105Y 116.85 678 45Y 110.85 596 78X 113.15 - 110X 116.50 - 4 44X 110.75 596 78Y 112.85 - 105X 116.80 - 4 44Y 111.05 596 78Y 112.85 - 105X 116.80 - 4 44Y 111.05 596 78Y 113.15 - 110X 116.50 - 4 44Y 111.05 596 78Y 113.15 - 110X 116.50 - 4 44Y 111.05 596 78Y 113.15 - 110X 116.50 - 5 45Y 110.85 596 78Y 113.15 - 110X 116.50 - 5 44Y 11.15 602 88X 113.90 - 115Y 116.15 680 40X 111.25 604 88X 113.90 - 115Y 116.75 688 50X 111.50 688 88X 113.90 - 115Y 116.75 688 50X 111.50 688 88X 113.90 - 115Y 116.75 688 50X 111.50 618 88X 113.90 - 115Y 116.55 684 50X 111.50 618 88X 113.90 - 115Y 116.55 684 50X 111.50 618 88X 113.90 - 115Y 117.75 699 50X 111.55 610 88X 113.90 - 115Y 117.75 699 50X 111.55 618 88X 114.10 - 129Y 117.75 699 50X 111.55 618 88X 114.10 - 129Y 117.75 699 50X 111.55 618 88X 114.10 - 12	31X	109.40				-	96X		-
32Y	31Y	109.45	568	64X	133.70	-	96Y	114.95	652
33X 109.60 - 66Y 133.85 - 98X 115.10 - 33Y 109.65 572 66X 133.90 - 98Y 115.15 665 668 133.90 - 98Y 115.15 665 668 133.91 - 99X 115.20 - 34X 109.70 516 66Y 133.95 - 99X 115.20 - 35X 109.80 - 67Y 134.05 - 100X 115.30 658 35X 109.80 - 67Y 134.05 - 100X 115.30 - 35Y 109.85 576 68X 134.10 - 100Y 115.35 660 36X 109.90 518 68Y 134.15 - 101X 115.40 - 36Y 109.95 578 66X 134.20 - 101Y 115.40 - 37Y 110.00 - 66Y 134.25 - 102X 115.50 - 37Y 110.00 - 66Y 134.25 - 102X 115.50 - 37Y 110.05 580 70X 112.30 - 102Y 115.55 664 38X 110.10 520 70Y 112.35 - 102X 115.50 - 38Y 110.15 582 71X 112.40 - 103X 115.60 - 38Y 110.15 582 71X 112.40 - 103Y 115.60 668 39X 110.20 - 71Y 112.45 - 104X 115.70 668 40X 110.35 584 72X 112.50 - 104X 115.70 668 40X 110.35 586 72X 112.80 - 105X 115.80 670 41Y 110.35 586 72X 112.80 - 105X 115.80 670 41Y 110.45 588 74X 112.70 - 106X 115.80 670 41Y 110.45 588 74X 112.70 - 106X 115.80 674 41Y 110.45 588 74X 112.70 - 106X 115.80 674 41Y 110.55 590 75X 112.80 - 107X 116.05 674 41Y 110.55 590 75X 112.80 - 107X 116.05 674 41Y 110.55 590 75X 112.80 - 107X 116.05 674 41Y 110.65 594 77X 112.85 - 106X 115.80 674 41Y 110.55 590 75X 112.80 - 106X 115.90 674 41Y 110.55 590 75X 112.80 - 106X 115.90 674 41Y 110.55 590 75X 112.80 - 106X 115.90 674 41Y 110.55 590 75X 112.80 - 106X 115.90 674 41Y 110.55 590 75X 112.80 - 106X 115.90 674 41Y 110.55 590 75X 112.80 - 106X 115.90 674 41Y 110.55 590 75X 112.80 - 106X 115.90 674 41Y 110.55 590 75X 112.80 - 106X 115.90 674 41Y 110.55 590 75X 112.80 - 106X 115.90 674 41Y 110.55 590 75X 112.80 - 106X 115.90 674 41Y 110.55 590 75X 112.80 - 106X 115.90 674 41Y 110.55 590 75X 112.80 - 106X 115.90 674 41Y 110.55 590 75X 112.80 - 106X 115.90 674 41Y 110.55 590 75X 112.80 - 106X 115.90 674 41Y 110.55 590 75X 112.80 - 106X 115.90 675 678 678 678 678 678 678 678 678 678 678	32X	109.50	514	64Y	133.75	-	97X	115.00	-
34X 109.65 572 66K 133.90 - 98Y 115.15 656 34X 109.70 516 66V 133.95 - 99X 115.20 - 34Y 109.75 574 67X 134.00 - 99Y 115.25 658 35X 109.80 - 67Y 134.05 - 100X 115.30 60 36X 109.90 518 68X 134.10 - 100Y 115.35 660 36X 109.90 518 68X 134.10 - 100Y 115.35 660 36X 109.90 518 68X 134.25 - 100X 115.30 - 36Y 109.95 578 60X 134.20 - 101Y 115.45 662 37X 110.00 - 69Y 134.25 - 100X 115.50 - 37Y 110.05 580 70X 112.30 - 100Y 115.55 664 38X 110.10 520 70Y 112.35 - 103X 115.65 - 38Y 110.15 582 71X 112.45 - 104X 115.70 - 38Y 110.25 584 72X 112.50 - 104X 115.70 - 39Y 110.25 584 72X 112.50 - 104X 115.70 - 40X 110.30 522 72Y 112.55 - 105X 115.80 - 40X 110.30 522 72Y 112.55 - 105X 115.80 - 41X 110.40 - 73Y 112.60 - 105Y 115.85 670 41X 110.40 - 73Y 112.60 - 105Y 115.85 672 42X 110.55 590 75X 112.80 - 107X 116.00 - 4 42X 110.50 524 74Y 112.75 - 107X 116.00 - 4 42X 110.50 524 74Y 112.70 - 106Y 115.75 672 42X 110.50 590 75X 112.80 - 107Y 116.05 674 43X 110.60 - 75Y 112.85 - 106X 115.90 - 4 43X 110.60 - 75Y 112.85 - 106X 116.30 - 6 44X 110.70 526 76Y 112.95 - 106X 116.30 - 6 44X 110.70 526 76Y 112.95 - 106X 116.50 - 6 44X 110.70 526 76Y 112.95 - 106X 116.50 - 6 44X 110.70 526 76Y 112.95 - 106X 116.50 - 6 44X 110.70 526 76Y 112.95 - 106X 116.50 - 6 44X 110.70 526 76Y 112.95 - 106X 116.50 - 6 44X 110.70 526 76Y 112.95 - 106X 116.50 - 6 44X 110.70 526 76Y 112.95 - 106X 116.50 - 6 44X 110.70 526 76Y 112.95 - 106X 116.50 - 6 45Y 110.85 596 78X 113.15 - 111X 116.40 - 6 45Y 110.85 596 78X 113.15 - 111X 116.60 - 6 45Y 110.85 596 78X 113.15 - 111X 116.60 - 6 45Y 110.85 596 78X 113.15 - 111X 116.60 - 6 46Y 110.95 598 79X 113.25 - 112X 116.50 - 6 50Y 111.55 604 80Y 113.55 620 113X 116.60 - 6 50Y 111.55 610 80Y 113.55 620 113X 116.60 - 6 50Y 111.55 610 80Y 113.55 620 113X 116.60 - 6 50Y 111.55 610 80Y 113.55 620 113X 116.60 - 6 50Y 111.55 610 80Y 113.55 620 113X 116.60 - 6 50Y 111.55 610 80Y 113.55 620 113X 116.60 - 6 50Y 111.55 610 80Y 113.55 620 113X 116.60 - 6 50Y 111.55 610 80Y 113.55 620 113X 116.60 - 6 50Y 111.55 618 80Y 113.55 620 113X 116.6	32Y	109.55	570	65X	133.80	-	97Y	115.05	654
34X         109.70         516         66Y         133.95         -         99X         115.20         -         38X         109.80         -         67X         134.00         -         99Y         115.25         68S         38X         109.80         -         67Y         134.05         -         100X         115.30         -         68D         38X         109.90         518         68X         134.15         -         101X         115.40         -         36Y         109.95         578         69X         134.20         -         101Y         115.45         662         37X         110.05         580         70X         112.36         -         102X         115.50         -         37Y         110.05         580         70X         112.36         -         103X         115.60         -         38X         110.16         582         71X         112.40         -         103X         115.60         -         38X         110.15         582         72X         112.40         -         103X         115.60         -         38X         110.15         582         72X         112.55         -         104X         115.75         668         -         40X         110.35	33X	109.60	-	65Y	133.85	-	98X	115.10	-
34Y         109.75         574         67X         134.00         -         99Y         115.25         688           35X         109.85         576         68X         134.10         -         100Y         115.35         668           36Y         109.90         518         68Y         134.15         -         101X         115.45         662           37X         110.00         69Y         134.20         -         101Y         115.45         662           37X         110.00         590         70X         112.30         -         102Y         115.55         664           38X         110.15         582         71X         112.40         -         103X         115.60         -         664           38X         110.25         584         72X         112.50         -         104Y         115.75         668           40X         110.35         584         72X         112.50         -         104Y         115.75         668           40X         110.35         586         73X         112.60         -         105Y         115.85         670           41X         110.45         587         74X	33Y	109.65	572	66X	133.90	-	98Y	115.15	656
35X         109.80         -         67Y         134.05         -         100X         115.30         -           36X         109.90         518         68Y         134.15         -         101X         115.40         -           36Y         109.95         578         69X         134.20         -         101Y         115.45         662           37X         110.05         580         70X         112.35         -         102X         115.50         -           37Y         110.05         580         70X         112.35         -         103X         115.60         -           38Y         110.15         582         71X         112.46         -         103X         115.65         664           38Y         110.20         -         71Y         112.45         -         104X         115.75         668           38X         110.15         582         72X         112.50         -         104X         115.75         666           38Y         110.25         584         72X         112.55         -         106X         115.75         668           40X         110.30         52         72Y         112.5	34X	109.70	516	66Y	133.95	-	99X	115.20	-
36X 109.95 576 68X 134.15 - 101X 115.35 660 68Y 130.95 578 69X 134.25 - 101X 115.45 662 37X 110.00 - 69Y 134.25 - 102X 115.55 664 38X 110.10 520 70Y 112.35 - 103X 115.60 - 38Y 110.15 582 71X 112.40 - 103Y 115.55 664 38X 110.10 520 70Y 112.35 - 103X 115.65 666 39X 110.20 - 71Y 112.45 - 104X 115.70 - 39Y 110.25 584 72X 112.50 - 104Y 115.75 668 40X 110.30 522 72Y 112.55 - 105X 115.80 - 104X 115.70 - 105X 115.80 - 107X 110.55 566 73X 112.60 - 105Y 115.85 670 41X 110.45 586 74X 112.70 - 106Y 115.85 672 42X 110.50 524 74Y 112.75 - 106X 115.90 - 42X 110.50 524 74Y 112.75 - 107X 116.00 - 43X 110.60 - 75Y 112.85 - 107X 116.00 - 43X 110.60 - 75Y 112.85 - 107X 116.00 - 44X 110.70 526 76X 112.90 - 108X 116.15 676 44X 110.70 526 76Y 112.95 - 108X 116.10 - 44X 110.75 594 77X 113.00 - 109Y 116.25 678 44X 110.75 594 77X 113.00 - 109Y 116.25 678 44X 110.70 526 78X 113.10 - 110X 116.30 - 44X 110.75 598 79X 113.15 - 111X 116.40 - 44X 110.75 598 79X 113.15 - 111X 116.40 - 44X 110.75 598 79X 113.15 - 111X 116.40 - 44X 110.75 598 79X 113.20 - 111Y 116.55 684 49X 111.15 602 81X 113.10 - 110Y 116.55 684 49X 111.15 602 81X 113.10 - 110Y 116.55 684 49X 111.15 602 81X 113.15 - 111X 116.40 - 51X 111X 116.40 - 51X 111X 116.40 - 88Y 113.15 - 111X 116.60 - 51X	34Y	109.75	574	67X	134.00	-	99Y	115.25	658
36X         109.90         518         68Y         134.20         -         101X         115.40         -           37X         110.00         -         69Y         134.25         -         102X         115.50         -           37X         110.05         580         70X         112.30         -         102X         115.50         -           38X         110.15         582         71X         112.35         -         103X         115.65         664           38X         110.20         -         71Y         112.45         -         104X         115.70         -           38Y         110.25         584         72X         112.50         -         104X         115.75         668           40X         110.30         522         72Y         112.55         -         106X         115.75         668           40X         110.35         586         73X         112.60         -         106X         115.85         670           41Y         110.45         588         74X         112.70         -         106X         115.95         -         24X         110.60         -         75X         112.80         - </td <td>35X</td> <td>109.80</td> <td>-</td> <td>67Y</td> <td>134.05</td> <td>-</td> <td>100X</td> <td>115.30</td> <td>-</td>	35X	109.80	-	67Y	134.05	-	100X	115.30	-
36Y         109.95         578         69X         134.20         -         101X         115.50         -           37Y         110.05         580         70X         112.30         -         102X         115.55         -           38X         110.10         520         70Y         112.35         -         103X         115.60         -           38Y         110.15         582         71X         112.40         -         103Y         115.65         666           38X         110.20         -         71Y         112.45         -         104X         115.76         -           40X         110.30         522         72Y         112.55         -         105X         115.86         -           40Y         110.35         586         73X         112.60         -         105Y         115.85         670           41X         110.40         -         73Y         112.65         -         106X         115.95         672           41X         110.40         -         73Y         112.65         -         106X         115.95         672           42Y         110.55         588         74X         112.70 </td <td>35Y</td> <td>109.85</td> <td>576</td> <td>68X</td> <td>134.10</td> <td>-</td> <td>100Y</td> <td>115.35</td> <td>660</td>	35Y	109.85	576	68X	134.10	-	100Y	115.35	660
37X         110.00         -         69Y         134.25         -         102Y         115.55         664           38X         110.10         520         70Y         112.35         -         103Y         115.65         664           38Y         110.15         582         71X         112.40         -         103Y         115.65         666           39X         110.25         584         72X         112.50         -         104X         115.70         -           39Y         110.25         584         72X         112.50         -         104Y         115.75         668           40X         110.30         522         72Y         112.55         -         108X         115.80         -           40Y         110.35         586         73X         112.65         -         106X         115.80         -           41X         110.40         -         73Y         112.65         -         106X         115.80         -           41X         110.65         589         75X         112.85         -         106X         115.99         -           42X         110.55         590         75X         112.85	36X	109.90	518	68Y	134.15	-	101X	115.40	-
37Y         110.05         580         70X         112.30         -         102Y         115.55         664           38Y         110.10         520         70Y         112.35         -         103X         115.65         666           38Y         110.20         -         71Y         112.45         -         103X         115.65         666           39Y         110.25         584         72X         112.50         -         104X         115.76         688           40X         110.30         522         72Y         112.55         -         105X         115.86         67           41X         110.40         -         73Y         112.60         -         106Y         115.85         67           41X         110.40         -         73Y         112.65         -         106X         115.95         67           41X         110.40         -         73Y         112.65         -         106X         115.95         672           41Y         110.65         588         74X         112.70         -         106Y         116.00         -           42Y         110.55         590         75X         112.8	36Y	109.95	578	69X	134.20	-	101Y	115.45	662
38X         110.10         520         70Y         112.35         -         103X         115.65         666           39X         110.15         582         71X         112.40         -         103Y         115.65         666           39X         110.25         584         72X         112.50         -         104Y         115.70         -           39Y         110.25         584         72X         112.55         -         105X         115.70         -           40X         110.30         522         72Y         112.55         -         105X         115.80         -           40Y         110.35         586         73X         112.65         -         106X         115.90         -           41Y         110.45         588         74X         112.70         -         106X         115.90         -           42X         110.50         594         75X         112.80         -         107Y         116.00         -           43X         110.60         -         75Y         112.85         -         108X         116.10         -           43X         110.60         -         77Y         113.00 <td>37X</td> <td>110.00</td> <td>-</td> <td>69Y</td> <td>134.25</td> <td>-</td> <td>102X</td> <td>115.50</td> <td>-</td>	37X	110.00	-	69Y	134.25	-	102X	115.50	-
38Y         110.15         582         71X         112.40         . 103Y         115.65         666           39Y         110.25         584         72X         112.50         . 104Y         115.75         668           40X         110.30         522         72Y         112.55         . 105X         115.85         670           41X         110.04         . 73Y         112.65         . 106X         115.95         672           41X         110.40         . 73Y         112.65         . 106X         115.95         672           41X         110.40         . 588         74X         112.75         . 106X         115.95         672           42X         110.50         524         74Y         112.75         . 107X         116.00         .           42Y         110.55         590         75X         112.85         . 108X         116.10         .           43X         110.60         . 75Y         112.85         . 109X         116.20         .           44X         110.70         526         76X         112.90         . 108X         116.15         676           45Y         110.85         596         78X         113.10<	37Y	110.05	580	70X	112.30	-	102Y	115.55	664
39X         110.20         .         71Y         112.45         .         104X         115.75         668           40X         110.30         522         72Y         112.55         .         105X         115.80         .           40Y         110.35         586         73X         112.60         .         105Y         115.85         .           41X         110.40         .         73Y         112.65         .         106Y         115.95         .           41Y         110.45         588         74X         112.70         .         106Y         115.95         .           42X         110.55         590         75X         112.80         .         107Y         116.00         .           43X         110.60         .         75Y         112.85         .         108X         116.10         .           43X         110.60         .         75Y         112.85         .         108X         116.10         .           43Y         110.65         592         76X         112.90         .         108Y         116.25         678           44Y         110.70         526         76Y         112.95	38X	110.10	520	70Y	112.35	-	103X	115.60	-
39Y         110.25         584         72X         112.50         . 104Y         115.75         668           40X         110.30         522         72Y         112.55         . 105X         115.80         .           40Y         110.35         586         73X         112.60         . 105Y         115.85         670           41X         110.40         . 73Y         112.65         . 106X         115.95         672           41Y         110.45         588         74X         112.70         . 106Y         115.95         672           42X         110.50         524         74Y         112.75         . 107X         116.00         .           42Y         110.55         590         75X         112.80         . 107Y         116.05         674           43X         110.65         592         76X         112.90         . 108Y         116.15         676           44X         110.75         594         77X         113.00         . 109Y         116.20         .           45Y         110.85         596         78X         113.10         . 110Y         116.30         .           45Y         110.85         596	38Y	110.15	582	71X	112.40	-	103Y	115.65	666
40X         110.30         522         72Y         112.55         .         105X         115.80         .           40Y         110.35         586         73X         112.60         .         105Y         115.85         670           41X         110.40         .         73Y         112.65         .         106X         115.90         .           41Y         110.45         588         74X         112.75         .         106Y         115.95         672           42X         110.55         590         75X         112.85         .         107Y         116.05         672           42Y         110.65         592         76X         112.85         .         108X         116.10         .           43Y         110.65         592         76X         112.90         .         108Y         116.25         676           44X         110.70         526         76Y         112.95         .         109X         116.25         676           45X         110.80         .         77Y         113.00         .         110Y         116.25         678           45Y         110.85         596         78X         11	39X	110.20	-	71Y	112.45	-	104X	115.70	-
40Y         110.35         586         73X         112.60         -         105Y         115.85         670           41X         110.40         -         73Y         112.65         -         106X         115.90         -           41Y         110.45         588         74X         112.70         -         106Y         115.95         672           42X         110.50         524         74Y         112.75         -         107X         116.00         -           43X         110.60         -         75Y         112.85         -         108X         116.10         -           43Y         110.65         592         76X         112.95         -         109X         116.15         676           44X         110.75         594         77X         113.00         -         109Y         116.25         678           45Y         110.85         596         78X         113.10         -         110Y         116.35         680           46X         110.95         598         79X         113.20         -         111Y         116.45         682           47X         111.00         -         79Y         113.	39Y	110.25	584	72X	112.50	-	104Y	115.75	668
41X         110.40         -         73Y         112.65         -         106X         115.90         -           41Y         110.45         588         74X         112.70         -         106Y         115.95         672           42X         110.55         590         75X         112.80         -         107Y         116.05         674           43X         110.65         592         76X         112.90         -         108Y         116.15         676           44X         110.70         526         76Y         112.95         -         108Y         116.15         676           44X         110.70         526         76Y         112.95         -         109X         116.25         678           44Y         110.75         594         77X         113.05         -         110X         116.30         -           45X         110.80         -         77Y         113.05         -         110X         116.30         -           45Y         110.85         596         78X         113.15         -         111X         116.40         -           47Y         110.05         600         80X         113.	40X	110.30	522	72Y	112.55	-	105X	115.80	-
41Y         110.45         588         74X         112.70         -         106Y         115.95         672           42X         110.55         590         75X         112.80         -         107Y         116.00         -           43X         110.60         -         75Y         112.85         -         108X         116.10         -           43Y         110.65         592         76X         112.90         -         108Y         116.15         676           44X         110.70         526         76Y         112.95         -         109X         116.20         -           44Y         110.75         594         77X         113.05         -         110X         116.20         -           45X         110.80         -         77Y         113.05         -         110X         116.30         -           46X         110.95         598         79X         113.20         -         111Y         116.40         -           47Y         111.05         600         80X         113.30         -         112Y         116.55         684           48X         111.10         530         80Y         113.35 </td <td>40Y</td> <td>110.35</td> <td>586</td> <td>73X</td> <td>112.60</td> <td>-</td> <td>105Y</td> <td>115.85</td> <td>670</td>	40Y	110.35	586	73X	112.60	-	105Y	115.85	670
42X         110.50         524         74Y         112.75         -         107X         116.00         -           42Y         110.55         590         75X         112.80         -         107Y         116.05         674           43X         110.65         592         76X         112.90         -         108Y         116.15         676           44X         110.75         594         77X         113.00         -         109Y         116.25         678           45X         110.80         -         77Y         113.05         -         110X         116.30         -           45Y         110.85         596         78X         113.10         -         110Y         116.35         680           46X         110.90         528         78Y         113.15         -         111X         116.40         -           47Y         111.05         600         80X         113.20         -         1112Y         116.50         -           47Y         111.05         600         80X         113.30         -         112Y         116.55         684           48X         111.15         602         81X         1	41X	110.40	-	73Y	112.65	-	106X	115.90	-
42Y         110.55         590         75X         112.80         -         107Y         116.05         674           43X         110.60         -         75Y         112.85         -         108X         116.10         -           43Y         110.65         592         76X         112.95         -         109X         116.20         -           44Y         110.70         526         76Y         112.95         -         109X         116.20         -           44Y         110.70         526         76Y         112.95         -         109X         116.20         -           44Y         110.80         .         77Y         113.00         -         110Y         116.30         -           45Y         110.85         596         78X         113.10         -         110Y         116.35         680           46X         110.95         598         79X         113.20         -         111Y         116.45         682           47X         111.00         .         79Y         113.25         -         112X         116.50         .         .           47Y         111.05         500         80Y	41Y	110.45	588	74X	112.70	-	106Y	115.95	672
43X         110.60         -         75Y         112.85         -         108X         116.10         -           43Y         110.65         592         76X         112.90         -         108Y         116.15         676           44X         110.70         526         76Y         112.95         -         109Y         116.20         -           44Y         110.75         594         77X         113.00         -         109Y         116.25         678           45Y         110.85         596         78X         113.10         -         110Y         116.35         680           46X         110.90         528         78Y         113.15         -         111X         116.40         -           46Y         110.90         528         78Y         113.20         -         111Y         116.45         682           47X         111.00         -         79Y         113.25         -         112X         116.50         -           47X         111.10         530         80Y         113.35         620         113X         116.60         -           48X         111.15         602         81X         113.	42X	110.50	524	74Y	112.75	-	107X	116.00	-
43Y         110.65         592         76X         112.90         -         108Y         116.15         676           44X         110.70         526         76Y         112.95         -         109X         116.20         -           44Y         110.75         594         77X         113.00         -         109Y         116.25         678           45X         110.80         -         77Y         113.05         -         110X         116.30         -           45Y         110.85         596         78X         113.10         -         110Y         116.35         680           46X         110.95         598         79X         113.25         -         111X         116.40         -           47X         111.05         600         80X         113.30         -         1112Y         116.55         684           48X         111.10         530         80Y         113.30         -         112Y         116.65         686           48X         111.10         -         81Y         113.40         -         113Y         116.65         686           49X         111.20         -         81Y         113	42Y	110.55	590	75X	112.80	-	107Y	116.05	674
44X         110.70         526         76Y         112.95         -         109X         116.25         678           44Y         110.75         594         77X         113.00         -         109Y         116.25         678           45Y         110.85         596         78X         113.10         -         110Y         116.35         680           46X         110.90         528         78Y         113.15         -         111X         116.40         -           46Y         110.95         598         79X         113.20         -         111Y         116.45         682           47X         111.00         -         79Y         113.25         -         112X         116.50         -           47Y         111.05         600         80X         113.35         620         113X         116.60         -           48X         111.15         602         81X         113.40         -         113Y         116.65         686           49X         111.25         604         82X         113.50         -         114Y         116.70         -           49Y         111.25         604         82X	43X	110.60	-	75Y	112.85	-	108X	116.10	-
44Y         110.75         594         77X         113.00         -         109Y         116.25         678           45X         110.80         -         77Y         113.05         -         110X         116.35         -           45Y         110.85         596         78X         113.10         -         110Y         116.35         680           46X         110.90         528         78Y         113.15         -         111X         116.40         -           46Y         110.95         598         79X         113.25         -         111Y         116.50         -           47X         111.05         600         80X         113.30         -         112Y         116.55         684           48X         111.10         530         80Y         113.35         620         113X         116.65         686           49X         111.20         -         81Y         113.45         622         114X         116.70         -           49Y         111.25         604         82X         113.55         624         115X         116.80         -           50Y         111.35         606         83X	43Y	110.65	592	76X	112.90	-	108Y	116.15	676
45X         110.80         -         77Y         113.05         -         110X         116.30         -           45Y         110.85         596         78X         113.10         -         110Y         116.35         680           46Y         110.95         598         79X         113.20         -         111Y         116.40         -           47Y         111.00         -         79Y         113.25         -         111Y         116.50         -           47Y         111.05         600         80X         113.30         -         112Y         116.50         -           48X         111.10         530         80Y         113.35         620         113X         116.60         -           48Y         111.25         602         81X         113.40         -         113Y         116.65         686           49X         111.25         604         82X         113.50         -         114Y         116.70         -           49Y         111.25         604         82X         113.50         -         114Y         116.70         -           50X         111.30         532         82Y         113.55 </td <td>44X</td> <td>110.70</td> <td>526</td> <td>76Y</td> <td>112.95</td> <td>-</td> <td>109X</td> <td>116.20</td> <td>-</td>	44X	110.70	526	76Y	112.95	-	109X	116.20	-
45Y         110.85         596         78X         113.10         -         110Y         116.35         680           46X         110.90         528         78Y         113.15         -         111X         116.40         -           46Y         110.95         598         79X         113.20         -         111Y         116.50         -           47X         111.00         -         79Y         113.25         -         112X         116.50         -           47Y         111.05         600         80X         113.30         -         112Y         116.55         684           48X         111.15         602         81X         113.40         -         113Y         116.65         686           49X         111.20         -         81Y         113.50         -         114Y         116.70         -           49Y         111.25         604         82X         113.50         -         114Y         116.75         688           50X         111.30         532         82Y         113.55         624         115X         116.80         -           51Y         111.45         608         84X         113.	44Y	110.75	594	77X	113.00	-	109Y	116.25	678
46X         110.90         528         78Y         113.15         -         111X         116.40         -           46Y         110.95         598         79X         113.20         -         111Y         116.50         -           47X         111.00         -         79Y         113.25         -         112X         116.50         -           47Y         111.05         600         80X         113.30         -         112Y         116.55         684           48X         111.10         530         80Y         113.35         620         113X         116.60         -           48Y         111.15         602         81X         113.40         -         113Y         116.65         686           49X         111.25         604         82X         113.50         -         114Y         116.75         688           50X         111.30         532         82Y         113.55         624         115X         116.80         -           50Y         111.35         606         83X         113.60         -         115Y         116.85         690           51X         111.40         -         83Y         11	45X	110.80	-	77Y	113.05	-	110X	116.30	-
46Y         110.95         598         79X         113.20         -         111Y         116.45         682           47X         111.00         -         79Y         113.25         -         112X         116.50         -           47Y         111.05         600         80X         113.30         -         112Y         116.50         -           48X         111.10         530         80Y         113.35         620         113X         116.60         -           48Y         111.15         602         81X         113.40         -         113Y         116.65         686           49X         111.25         604         82X         113.50         -         114Y         116.75         688           50X         111.35         606         83X         113.50         -         115Y         116.85         690           51X         111.40         -         83Y         113.65         626         116X         116.80         -           51Y         111.45         608         84X         113.70         -         116Y         116.95         692           52X         111.50         534         84Y	45Y	110.85	596	78X	113.10	-	110Y	116.35	680
47X         111.00         -         79Y         113.25         -         112X         116.50         -           47Y         111.05         600         80X         113.30         -         112Y         116.55         684           48X         111.10         530         80Y         113.35         620         113X         116.60         -           48Y         111.15         602         81X         113.40         -         113Y         116.65         686           49X         111.20         -         81Y         113.45         622         114X         116.70         -           49Y         111.25         604         82X         113.50         -         114Y         116.75         688           50X         111.35         606         83X         113.60         -         115Y         116.80         -           50Y         111.35         606         83X         113.60         -         115Y         116.85         690           51X         111.45         608         84X         113.70         -         116Y         116.90         -           51Y         111.50         534         84Y         11		110.90			113.15	-		116.40	-
47Y         111.05         600         80X         113.30         -         112Y         116.55         684           48X         111.10         530         80Y         113.35         620         113X         116.60         -           48Y         111.15         602         81X         113.40         -         113Y         116.65         686           49X         111.25         604         82X         113.50         -         114Y         116.75         688           50X         111.35         606         83X         113.55         624         115X         116.80         -           50Y         111.35         606         83X         113.65         626         116X         116.80         -           51X         111.40         -         83Y         113.65         626         116X         116.90         -           51Y         111.45         608         84X         113.70         -         116Y         116.95         692           52X         111.50         534         84Y         113.75         628         117X         117.00         -           52Y         111.55         610         85X	46Y	110.95	598	79X	113.20	-	111Y	116.45	682
48X         111.10         530         80Y         113.35         620         113X         116.60         -           48Y         111.15         602         81X         113.40         -         113Y         116.65         686           49X         111.20         -         81Y         113.45         622         114X         116.70         -           49Y         111.25         604         82X         113.55         -         114Y         116.75         688           50X         111.30         532         82Y         113.55         624         115X         116.80         -           50Y         111.35         606         83X         113.60         -         115Y         116.85         690           51X         111.40         -         83Y         113.65         626         116X         116.90         -           51Y         111.45         608         84X         113.70         -         116Y         116.95         692           52X         111.50         534         84Y         113.75         628         117X         117.00         -           52Y         111.55         610         85X	47X	111.00	-	79Y	113.25	-	112X	116.50	-
48Y         111.15         602         81X         113.40         -         113Y         116.65         686           49X         111.20         -         81Y         113.45         622         114X         116.70         -           49Y         111.25         604         82X         113.50         -         114Y         116.75         688           50X         111.30         532         82Y         113.55         624         115X         116.80         -           50Y         111.35         606         83X         113.60         -         115Y         116.85         690           51X         111.40         -         83Y         113.65         626         116X         116.90         -           51Y         111.45         608         84X         113.70         -         116Y         116.95         692           52X         111.50         534         84Y         113.70         -         116Y         116.95         692           52X         111.55         610         85X         113.80         -         117Y         117.00         -           53X         111.60         -         85Y		111.05			113.30	-	112Y	116.55	684
49X         111.20         -         81Y         113.45         622         114X         116.70         -           49Y         111.25         604         82X         113.50         -         114Y         116.75         688           50X         111.30         532         82Y         113.55         624         115X         116.80         -           50Y         111.35         606         83X         113.60         -         115Y         116.85         690           51X         111.40         -         83Y         113.65         626         116X         116.90         -           51Y         111.45         608         84X         113.70         -         116Y         116.95         692           52X         111.50         534         84Y         113.75         628         117X         117.00         -           52Y         111.55         610         85X         113.85         630         118X         117.10         -           53Y         111.65         612         86X         113.95         632         119X         117.20         -           54X         111.70         536         86Y	48X	111.10	530	80Y	113.35	620	113X	116.60	-
49Y         111.25         604         82X         113.50         -         114Y         116.75         688           50X         111.30         532         82Y         113.55         624         115X         116.80         -           50Y         111.35         606         83X         113.60         -         115Y         116.80         -           51X         111.40         -         83Y         113.65         626         116X         116.90         -           51Y         111.45         608         84X         113.70         -         116Y         116.95         692           52X         111.50         534         84Y         113.75         628         117X         117.00         -           52Y         111.55         610         85X         113.85         630         118X         117.10         -           53X         111.60         -         85Y         113.85         630         118X         117.10         -           53Y         111.65         612         86X         113.90         -         118Y         117.15         696           54X         111.70         536         86Y <t< td=""><td></td><td></td><td>602</td><td></td><td>113.40</td><td></td><td></td><td>116.65</td><td>686</td></t<>			602		113.40			116.65	686
50X         111.30         532         82Y         113.55         624         115X         116.80         -           50Y         111.35         606         83X         113.60         -         115Y         116.85         690           51X         111.40         -         83Y         113.65         626         116X         116.90         -           51Y         111.45         608         84X         113.70         -         116Y         116.95         692           52X         111.50         534         84Y         113.75         628         117X         117.00         -           52Y         111.55         610         85X         113.80         -         117Y         117.05         694           53X         111.60         -         85Y         113.85         630         118X         117.10         -           53Y         111.65         612         86X         113.90         -         118Y         117.15         696           54X         111.70         536         86Y         113.95         632         119X         117.20         -           54X         111.75         614         87X	49X	111.20	-	81Y	113.45	622	114X	116.70	-
50Y         111.35         606         83X         113.60         -         115Y         116.85         690           51X         111.40         -         83Y         113.65         626         116X         116.90         -           51Y         111.45         608         84X         113.70         -         116Y         116.95         692           52X         111.50         534         84Y         113.75         628         117X         117.00         -           52Y         111.55         610         85X         113.80         -         117Y         117.05         694           53X         111.60         -         85Y         113.85         630         118X         117.10         -           53Y         111.65         612         86X         113.90         -         118Y         117.15         696           54X         111.70         536         86Y         113.95         632         119X         117.20         -           54Y         111.75         614         87X         114.00         -         119Y         117.25         698           55X         111.80         -         87Y <t< td=""><td></td><td></td><td></td><td></td><td>113.50</td><td>_</td><td>114Y</td><td>116.75</td><td>688</td></t<>					113.50	_	114Y	116.75	688
51X         111.40         -         83Y         113.65         626         116X         116.90         -           51Y         111.45         608         84X         113.70         -         116Y         116.95         692           52X         111.50         534         84Y         113.75         628         117X         117.00         -           52Y         111.55         610         85X         113.80         -         117Y         117.05         694           53X         111.60         -         85Y         113.85         630         118X         117.10         -           53Y         111.65         612         86X         113.90         -         118Y         117.15         696           54X         111.70         536         86Y         113.95         632         119X         117.20         -           54Y         111.75         614         87X         114.00         -         119Y         117.25         698           55X         111.80         -         87Y         114.05         634         120X         117.30         -           55Y         111.85         616         88X <t< td=""><td></td><td>111.30</td><td></td><td>82Y</td><td>113.55</td><td>624</td><td>115X</td><td>116.80</td><td>-</td></t<>		111.30		82Y	113.55	624	115X	116.80	-
51Y         111.45         608         84X         113.70         -         116Y         116.95         692           52X         111.50         534         84Y         113.75         628         117X         117.00         -           52Y         111.55         610         85X         113.80         -         117Y         117.05         694           53X         111.60         -         85Y         113.85         630         118X         117.10         -           53Y         111.65         612         86X         113.90         -         118Y         117.15         696           54X         111.70         536         86Y         113.95         632         119X         117.20         -           54Y         111.75         614         87X         114.00         -         119Y         117.25         698           55X         111.80         -         87Y         114.05         634         120X         117.30         -           55Y         111.85         616         88X         114.10         -         120Y         117.35         -           56X         111.90         538         88Y <t< td=""><td>50Y</td><td>111.35</td><td>606</td><td>83X</td><td>113.60</td><td>-</td><td>115Y</td><td>116.85</td><td>690</td></t<>	50Y	111.35	606	83X	113.60	-	115Y	116.85	690
52X         111.50         534         84Y         113.75         628         117X         117.00         -           52Y         111.55         610         85X         113.80         -         117Y         117.05         694           53X         111.60         -         85Y         113.85         630         118X         117.10         -           53Y         111.65         612         86X         113.90         -         118Y         117.15         696           54X         111.70         536         86Y         113.95         632         119X         117.20         -           54Y         111.75         614         87X         114.00         -         119Y         117.25         698           55X         111.80         -         87Y         114.05         634         120X         117.30         -           55Y         111.85         616         88X         114.10         -         120Y         117.35         -           56X         111.90         538         88Y         114.15         636         121X         117.40         -           57Y         112.00         -         89Y						626			_
52Y         111.55         610         85X         113.80         -         117Y         117.05         694           53X         111.60         -         85Y         113.85         630         118X         117.10         -           53Y         111.65         612         86X         113.90         -         118Y         117.15         696           54X         111.70         536         86Y         113.95         632         119X         117.20         -           54Y         111.75         614         87X         114.00         -         119Y         117.25         698           55X         111.80         -         87Y         114.05         634         120X         117.30         -           55Y         111.85         616         88X         114.10         -         120Y         117.35         -           56X         111.90         538         88Y         114.15         636         121X         117.40         -           56Y         111.95         618         89X         114.20         -         121Y         117.45         -           57Y         112.00         -         89Y         11			608		113.70	-	116Y	116.95	692
53X         111.60         -         85Y         113.85         630         118X         117.10         -           53Y         111.65         612         86X         113.90         -         118Y         117.15         696           54X         111.70         536         86Y         113.95         632         119X         117.20         -           54Y         111.75         614         87X         114.00         -         119Y         117.25         698           55X         111.80         -         87Y         114.05         634         120X         117.30         -           55Y         111.85         616         88X         114.10         -         120Y         117.35         -           56X         111.90         538         88Y         114.15         636         121X         117.40         -           56Y         111.95         618         89X         114.20         -         121Y         117.45         -           57X         112.00         -         89Y         114.25         638         122X         117.50         -           57Y         112.05         -         90X         114.	52X	111.50	534	84Y	113.75	628	117X	117.00	-
53Y         111.65         612         86X         113.90         -         118Y         117.15         696           54X         111.70         536         86Y         113.95         632         119X         117.20         -           54Y         111.75         614         87X         114.00         -         119Y         117.25         698           55X         111.80         -         87Y         114.05         634         120X         117.30         -           55Y         111.85         616         88X         114.10         -         120Y         117.35         -           56X         111.90         538         88Y         114.15         636         121X         117.40         -           56Y         111.95         618         89X         114.20         -         121Y         117.45         -           57X         112.00         -         89Y         114.25         638         122X         117.50         -           57Y         112.05         -         90X         114.30         -         122Y         117.55         -           58X         112.10         -         90Y         114.35			610			-			694
54X         111.70         536         86Y         113.95         632         119X         117.20         -           54Y         111.75         614         87X         114.00         -         119Y         117.25         698           55X         111.80         -         87Y         114.05         634         120X         117.30         -           55Y         111.85         616         88X         114.10         -         120Y         117.35         -           56X         111.90         538         88Y         114.15         636         121X         117.40         -           56Y         111.95         618         89X         114.20         -         121Y         117.45         -           57X         112.00         -         89Y         114.25         638         122X         117.50         -           57Y         112.05         -         90X         114.33         -         122Y         117.55         -           58X         112.10         -         90Y         114.35         640         123X         117.60         -           58Y         112.15         -         91X         114.40 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td>630</td> <td></td> <td>117.10</td> <td>-</td>						630		117.10	-
54Y         111.75         614         87X         114.00         -         119Y         117.25         698           55X         111.80         -         87Y         114.05         634         120X         117.30         -           55Y         111.85         616         88X         114.10         -         120Y         117.35         -           56X         111.90         538         88Y         114.15         636         121X         117.40         -           56Y         111.95         618         89X         114.20         -         121Y         117.45         -           57X         112.00         -         89Y         114.25         638         122X         117.50         -           57Y         112.05         -         90X         114.30         -         122Y         117.55         -           58X         112.10         -         90Y         114.35         640         123X         117.60         -           58Y         112.15         -         91X         114.40         -         123Y         117.65         -           59X         112.20         -         91Y         114.45		111.65			113.90			117.15	696
55X         111.80         -         87Y         114.05         634         120X         117.30         -           55Y         111.85         616         88X         114.10         -         120Y         117.35         -           56X         111.90         538         88Y         114.15         636         121X         117.40         -           56Y         111.95         618         89X         114.20         -         121Y         117.45         -           57X         112.00         -         89Y         114.25         638         122X         117.50         -           57Y         112.05         -         90X         114.30         -         122Y         117.55         -           58X         112.10         -         90Y         114.35         640         123X         117.60         -           58Y         112.15         -         91X         114.40         -         123Y         117.65         -           59X         112.20         -         91Y         114.45         642         124X         117.70         -           59Y         112.25         -         92X         114.50			536	86Y	113.95	632	119X	117.20	-
55Y         111.85         616         88X         114.10         -         120Y         117.35         -           56X         111.90         538         88Y         114.15         636         121X         117.40         -           56Y         111.95         618         89X         114.20         -         121Y         117.45         -           57X         112.00         -         89Y         114.25         638         122X         117.50         -           57Y         112.05         -         90X         114.30         -         122Y         117.55         -           58X         112.10         -         90Y         114.35         640         123X         117.60         -           58Y         112.15         -         91X         114.40         -         123Y         117.65         -           59X         112.20         -         91Y         114.45         642         124X         117.70         -           59Y         112.25         -         92X         114.50         -         124Y         117.75         -           60X         133.30         -         92Y         114.55	54Y	111.75	614	87X	114.00	-	119Y	117.25	698
56X         111.90         538         88Y         114.15         636         121X         117.40         -           56Y         111.95         618         89X         114.20         -         121Y         117.45         -           57X         112.00         -         89Y         114.25         638         122X         117.50         -           57Y         112.05         -         90X         114.30         -         122Y         117.55         -           58X         112.10         -         90Y         114.35         640         123X         117.60         -           58Y         112.15         -         91X         114.40         -         123Y         117.65         -           59X         112.20         -         91Y         114.45         642         124X         117.70         -           59Y         112.25         -         92X         114.50         -         124Y         117.75         -           60X         133.30         -         92Y         114.55         644         125X         117.80         -           60Y         133.35         -         93X         114.60						634			-
56Y         111.95         618         89X         114.20         -         121Y         117.45         -           57X         112.00         -         89Y         114.25         638         122X         117.50         -           57Y         112.05         -         90X         114.30         -         122Y         117.55         -           58X         112.10         -         90Y         114.35         640         123X         117.60         -           58Y         112.15         -         91X         114.40         -         123Y         117.65         -           59X         112.20         -         91Y         114.45         642         124X         117.70         -           59Y         112.25         -         92X         114.50         -         124Y         117.75         -           60X         133.30         -         92Y         114.55         644         125X         117.80         -           60Y         133.35         -         93X         114.60         -         125Y         117.85         -           61X         133.40         -         93Y         114.65	55Y	111.85			114.10	-	120Y	117.35	-
57X     112.00     -     89Y     114.25     638     122X     117.50     -       57Y     112.05     -     90X     114.30     -     122Y     117.55     -       58X     112.10     -     90Y     114.35     640     123X     117.60     -       58Y     112.15     -     91X     114.40     -     123Y     117.65     -       59X     112.20     -     91Y     114.45     642     124X     117.70     -       59Y     112.25     -     92X     114.55     644     125X     117.80     -       60X     133.30     -     92Y     114.55     644     125X     117.80     -       60Y     133.35     -     93X     114.60     -     125Y     117.85     -       61X     133.40     -     93Y     114.65     646     126X     117.90     -       62X     133.50     -     94X     114.75     648						636			-
57Y     112.05     -     90X     114.30     -     122Y     117.55     -       58X     112.10     -     90Y     114.35     640     123X     117.60     -       58Y     112.15     -     91X     114.40     -     123Y     117.65     -       59X     112.20     -     91Y     114.45     642     124X     117.70     -       59Y     112.25     -     92X     114.50     -     124Y     117.75     -       60X     133.30     -     92Y     114.55     644     125X     117.80     -       60Y     133.35     -     93X     114.60     -     125Y     117.85     -       61X     133.40     -     93Y     114.65     646     126X     117.90     -       61Y     133.45     -     94X     114.75     648			618						-
58X     112.10     -     90Y     114.35     640     123X     117.60     -       58Y     112.15     -     91X     114.40     -     123Y     117.65     -       59X     112.20     -     91Y     114.45     642     124X     117.70     -       59Y     112.25     -     92X     114.50     -     124Y     117.75     -       60X     133.30     -     92Y     114.55     644     125X     117.80     -       60Y     133.35     -     93X     114.60     -     125Y     117.85     -       61X     133.40     -     93Y     114.65     646     126X     117.90     -       61Y     133.45     -     94X     114.70     -     126Y     117.95     -       62X     133.50     -     94Y     114.75     648			-			638			-
58Y     112.15     -     91X     114.40     -     123Y     117.65     -       59X     112.20     -     91Y     114.45     642     124X     117.70     -       59Y     112.25     -     92X     114.50     -     124Y     117.75     -       60X     133.30     -     92Y     114.55     644     125X     117.80     -       60Y     133.35     -     93X     114.60     -     125Y     117.85     -       61X     133.40     -     93Y     114.65     646     126X     117.90     -       61Y     133.45     -     94X     114.70     -     126Y     117.95     -       62X     133.50     -     94Y     114.75     648			-			-			-
59X     112.20     -     91Y     114.45     642     124X     117.70     -       59Y     112.25     -     92X     114.50     -     124Y     117.75     -       60X     133.30     -     92Y     114.55     644     125X     117.80     -       60Y     133.35     -     93X     114.60     -     125Y     117.85     -       61X     133.40     -     93Y     114.65     646     126X     117.90     -       61Y     133.45     -     94X     114.70     -     126Y     117.95     -       62X     133.50     -     94Y     114.75     648			-			640			-
59Y     112.25     -     92X     114.50     -     124Y     117.75     -       60X     133.30     -     92Y     114.55     644     125X     117.80     -       60Y     133.35     -     93X     114.60     -     125Y     117.85     -       61X     133.40     -     93Y     114.65     646     126X     117.90     -       61Y     133.45     -     94X     114.70     -     126Y     117.95     -       62X     133.50     -     94Y     114.75     648			-			-			-
60X     133.30     -     92Y     114.55     644     125X     117.80     -       60Y     133.35     -     93X     114.60     -     125Y     117.85     -       61X     133.40     -     93Y     114.65     646     126X     117.90     -       61Y     133.45     -     94X     114.70     -     126Y     117.95     -       62X     133.50     -     94Y     114.75     648			-			642			-
60Y     133.35     -     93X     114.60     -     125Y     117.85     -       61X     133.40     -     93Y     114.65     646     126X     117.90     -       61Y     133.45     -     94X     114.70     -     126Y     117.95     -       62X     133.50     -     94Y     114.75     648			-			-			-
61X 133.40 - 93Y 114.65 646 126X 117.90 - 61Y 133.45 - 94X 114.70 - 126Y 117.95 - 62X 133.50 - 94Y 114.75 648		133.30	-		114.55	644		117.80	-
61Y 133.45 - 94X 114.70 - 126Y 117.95 - 62X 133.50 - 94Y 114.75 648			-			-			-
62X 133.50 - 94Y 114.75 648			-			646			-
			-			-	126Y	117.95	-
62Y 133.55 - 95X 114.80 -			-			648			
	62Y	133.55	-	95X	114.80	-			

# 35 COMM/NAV/WEATHER REMARKS:

These remarks consist of pertinent information affecting the current status of communications, NAVAIDs and weather.

ALAMO LANDING FLD (L92) 2 W UTC-8(-7DT) N37°21.75′ W115°11.67′

3719 NOTAM FILE RNO

RWY 14-32: 5000X120 (DIRT)

RWY 32: Berm. RWY 14. Brush

RWY 15-33: 2500X70 (DIRT)

RWY 15: Berm.

RWY 33: Berm.

AIRPORT REMARKS: Unattended. Uncontrolled vehicle access. No line of sight between rwy ends. Rwys 15-33 and Rwy 14-32 livestock in vicinity of rwys.

**COMMUNICATIONS: CTAF 122.9** 

**AUSTIN** (9U3) 4 SW UTC-8(-7DT) N39°28.08′ W117°11.72′

LAS VEGAS H-3C, L-9B

LAS VEGAS

5730 B NOTAM FILE RNO

RWY 18-36: H6000X75 (ASPH) S-30 MIRL RWY 18: REIL, PAPI(P2L)-GA 3.0° TCH 40'.

RWY 36: REIL. PAPI(P2L)-GA 3.0° TCH 40'. Fence.

AIRPORT REMARKS: Unattended. Military acft opr in vicinity of arpt. ACTIVATE MIRL Rwy 18-36, PAPI Rwys 18 and 36, REIL Rwy 18 and 36-CTAF.

**COMMUNICATIONS: CTAF 122.9** 

RADIO AIDS TO NAVIGATION: NOTAM FILE RNO.

MINA (H) VORTAC 115.1 MVA Chan 98 N38°33.92′ W118°01.97′ 019° 66.8 NM to fld. 7860/17E. HIWAS.

BATTLE MOUNTAIN (BAM) 3 SE UTC-8(-7DT) N40°35.94′ W116°52.46′

SALT LAKE CITY H-3C, L-9B, 11B

ΙΔΡ

4532 B S4 FUEL 100LL, JET A NOTAM FILE RNO

RWY 12-30: H7300X100 (ASPH) S-30, D-104, ST-159 MIRL RWY 03-21: H7299X150 (ASPH) S-30, D-125, ST-132

RWY 03: VASI(V2R)-GA 3.0° TCH 26'.

RWY 21: PAPI(P4L)-GA 3.0° TCH 45'.

AIRPORT REMARKS: Attended Oct-May 1500-0100Z‡, Jun-Sep

1500-0200Z‡. After hrs call 775-635-2245. ACTIVATE MIRL Rwy 03-21 and Rwy 12-30, and perimeter Igts H1-CTAF.

WEATHER DATA SOURCES: AWOS-3 119.45 (775) 635-8419.

COMMUNICATIONS: CTAF/UNICOM 122.8

MT LEWIS RCO 122.65 (RENO RADIO)

SALT LAKE CENTER APP/DEP CON 132.25

RADIO AIDS TO NAVIGATION: NOTAM FILE RNO.

(H) VORTACW 112.2 BAM Chan 59 N40°34.15'

W116°55.34' 033° 2.8 NM to fld. 4536/18E.

VORTAC unusable:

050°-060° byd 30 NM blo 12,000'

115°-165° byd 15 NM blo 12,000'

255°-290° byd 15 NM blo 12,000′

DME unusable 246°-255° byd 34 NM blo 14,000′ . . . . .

HELIPAD H1: H60X60 (CONC) HELIPAD H2: H60X60 (CONC)

HELIPORT REMARKS: Rwy H1 perimeter lights. ACTIVATE MIRL Rwy 03-21 and Rwy 12-30, and perimeter lgts H1-CTAF.

BEATTY (BTY) 3 SW UTC-8(-7DT) N36°51.66′ W116°47.22′

3170 B NOTAM FILE RNO

RWY 16-34: H5600X60 (ASPH) S-15, D-30 MIRI

AIRPORT REMARKS: Unattended. Low flying military aircraft in vicinity of arpt. Terrain rises at constant rate of approximately 35-1 for 2 miles to base of mountain. ACTIVATE MIRL Rwy 16-34-CTAF.

WEATHER DATA SOURCES: HIWAS 114.7 BTY.

COMMUNICATIONS: CTAF 122 9

RC0 122.1R 114.7T (RENO RADIO)

RADIO AIDS TO NAVIGATION: NOTAM FILE RNO.

(H) VORTAC 114.7 BTY Chan 94 N36°48.04'

W116°44.86' 313° 4.5 NM to fld. 2925/16E. HIWAS.

VORTAC unusable:

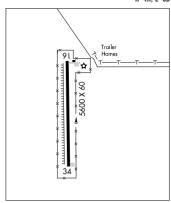
325°-089° beyond 9 NM

195°-210° beyond 33 NM below 10,500'

265°-305° beyond 30 NM below 10.200'

305°-325° beyond 28 NM below 9000'

360°-060° byd 12 NM



BOULDER CITY N35°59.75′ W114°51.82′ NOTAM FILE RNO.

(H) VORTACW 116.7 BLD Chan 114 163° 2.9 NM to Boulder City Muni. 3650/15E. HIWAS.

LAS VEGAS H-41, L-7E

LAS VEGAS

L-7E

**BOULDER CITY MUNI** (BVU) 1SW UTC-8(-7DT) N35°56.85′ W114°51.67′

2201 B S4 FUEL 100LL JET A NOTAM FILE RNO

RWY 09R-27L: H4800X75 (ASPH) S-12.5 MIRL RWY OSR: REIL, PAPI(P2L)-GA 3.0° TCH 40', Rgt tfc.

RWY 27L: REIL, PAPI(P2L)-GA 3.0° TCH 40', P-line.

RWY 15-33: H3850X75 (ASPH) S-12.5 MIRI

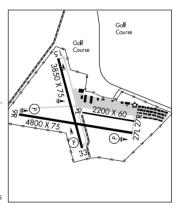
RWY 15: REIL. Rgt tfc.

RWY 33: REIL. PAPI(P2L)-GA 3.0° TCH 40'.

RWY 09L-27R: H2200X60 (ASPH) S-12.5

RWY 27R: Rgt tfc.

AIRPORT REMARKS: Attended 1600-0100Z‡, Self service fuel avbl continuously. For acft svc ctc 122.8 or 123.5. Parachute Jumping. Skydive drop zone adjacent arpt north side. Ultralight activity 2 miles southwest of arpt invof dry lake bed. Rwy 09L-27R rwy in poor condition due to multiple 2" wide cracks. Sage brush and uneven terrian in the rwy safety areas. Soft shoulders adjacent to all rwys and twys. Dep Rwy 33 not recommended. Rwy 33 steep rwy gradient, rising terrain, obstacles off dep end. Rwy 27L preferred lgt wind conditions. Helicopters cross active rwys and twys. Large number of Grand Cnayon tour acft ops in vicinity. Power lines all quadrants. 1'-5' drainage ditch around all runways and taxiways. 10' drainage channel 50' from thid crossing



centerline Rwy 09L. Steep rising terrain north of arpt. Avoid overflight of Boulder City residential areas. ACTIVATE MIRL Rwy 09R-27L and Rwy 15-33-CTAF.

WEATHER DATA SOURCES: AWOS-3 118.475 (702) 293-1532. HIWAS 116.7 BLD.

COMMUNICATIONS: CTAF/UNICOM 122.7

RADIO AIDS TO NAVIGATION: NOTAM FILE RNO.

(H) VORTACW 116.7 BLD Chan 114 N35°59.75′ W114°51.82′ 163° 2.9 NM to fld. 3650/15E. HIWAS.

**BULLION** N40°45.58′ W115°45.68′ NOTAM FILE EKO.

SALT LAKE CITY L-9B, 11B

(L) VORW/DME 114.5 BOU Chan 92 324° 4.2 NM to Elko Rgnl. 6464/17E. VOR unusable 088°-110° byd 20 NM blo 12,900′ 110°-130° byd 32 NM blo 12,900'.

DME unusable 088°-110° byd 20 NM 110°-130° byd 32 NM

LAS VEGAS H-4H, L-9B

CAL NEV ARI

KIDWELL (1L4) 0 S UTC-8(-7DT) N35°18.33' W114°52.97'

PHOENIX

2605 NOTAM FILE RNO

RWY 15-33: 4140X65 (DIRT) LIRL (NSTD)

RWY 15: Fence. RWY 33: Road.

AIRPORT REMARKS: Attended continuously. Ultralight activity on and invof arpt. Arpt is residential airpark. Be alert to automobile tfc on Rwy 15–33. +70′ twr 350° left of centerline Rwy 15 and adjacent to the thld. Rwy 15–33 center 4075′ Igtd. Rwy 15–33 NSTD LIRL thld Igts 6 green Igts.

COMMUNICATIONS: CTAF 122.9

CARSON CITY

CARSON (CXP) 3 NE UTC-8(-7DT) N39°11.53′ W119°44.07′

SAN FRANCISCO H-3r I-9a

4697~ B ~ S4 ~ FUEL 100, 100LL, Jet A ~ OX 1, 3 ~ TPA—5497(800) ~ Notam file CXP RWY 09–27: H5906X75 (ASPH) ~ S–30 ~ MIRL

RWY 09: PVASI(NSTD)—GA 4.0° TCH 35'. Road. Rgt tfc. RWY 27: VASI(V2L)—GA 3.0° TCH 26'.

AIRPORT REMARKS: Attended Jun-Sep 1500-0400Z‡. Oct-May 1600-0300Z‡. Fuel self-service 24 hrs. Ultralight

activity on and invof arpt. Rwy 09 non-standard PSIL single box left side. Fee for tiedown only.

WEATHER DATA SOURCES: AWOS-3 119.925 (775) 884-4708. COMMUNICATIONS: CTAF/UNICOM 123.0

(R) RENO APP/DEP CON 119.2

RADIO AIDS TO NAVIGATION: NOTAM FILE RNO.

MUSTANG (H) VORTACW 117.9 FMG Chan 126 N39°31.88′ W119°39.37′ 174° 20.7 NM to fld. 5949/16E.

PARKER CARSON (205) 5 E UTC-8(-7DT) N39°12.10′ W119°41.01′

SAN FRANCISCO

4939 NOTAM FILE RNO

(H) VORTAC 117.7 OAL Chan 124 67° 32.6 NM to Tonopah. 4800/17E.

RWY 06-24: 1700X40 (GRVL)

RWY 06: Road. RWY 24: Hill.

AIRPORT REMARKS: Unattended. Power lines north, south and west of arpt. Rwy 24 ground rises immediately to 15%. +2' sage brush on rwy edges full length.

COMMUNICATIONS: CTAF 122.9

COALDALE N38°00.20′ W117°46.23′ NOTAM FILE RNO.

LAS VEGAS

H-3B, L-9A

VOR unusable 060°-075° beyond 15 NM below 16,000'.

DME unusable 060°-075° beyond 15 NM below 16,000'.

VORTAC unusable:

RCO 122.1R 117.7T (RENO RADIO)

150°-180° beyond 15 NM below 15,500'

305°-015° beyond 25 NM below 15,500'

CREECH AFB (INS) N36°35.23′ W115°40.40′ NOTAM FILE RNO.

LAS VEGAS

 $\textbf{AIRSPACE: CLASS D} \text{ svc Mon-Fri } 1300-0530\text{Z}{\ddagger}, \text{ clsd weekends and holidays, Opr hr vary based on}$ 

Nellis AFB Wing rgr. ASOS 121.125 DSN 384-0667, C (702) 404-0667.

SALT LAKE CITY

CRESCENT VALLEY (U74) 1 E UTC-8(-7DT) N40°24.96' W116°33.81'
4787 NOTAM FILE RNO

RWY 05-23: 5424X60 (DIRT)

RWY 05: Road. RWY 23: Road.

RWY 14-32: 4650X75 (DIRT)

RWY 14: Tree.

AIRPORT REMARKS: Unattended. Cattle on and invof rwys. Rwy 05-23 first 1600' of Rwy 23 rough surface.

Uncontrolled vehicle access all runways. Rwy 14-32+2' earth ridges along rwy edges and 3' berm along both sides of rwy. Rwy 05-23-1' drainage ditch both sides rwy, +2' earth ridges along rwy edges.

COMMUNICATIONS: CTAF 122.9

CURRANT N38°40.25′ W115°36.07′

LAS VEGAS

RCO 122.3 (RENO RADIO)

CURRANT RANCH (9U7) 1 SW UTC-8(-7DT) N38°44.16′ W115°28.82′

5181 NOTAM FILE RNO

LAS VEGAS

L-9B

RWY 03-21: 5100X80 (TURF-DIRT)

WI 03-21: 3100AC

AIRPORT REMARKS: Unattended. Rwy 03–21 has unlimited vehicle access to acft movement area. Wind permitting land Rwy 03 tkf Rwy 21 to avoid overflying town. Space for tiedown, but no ropes or chains.

COMMUNICATIONS: CTAF 122.9

DAYTON/CARSON CITY

DAYTON VALLEY AIRPARK (A34) 2 E UTC-8(-7DT) N39°14.31′ W119°33.33′

Not insp.

SAN FRANCISCO H-3B. L-9A

RWY 05-23: H5343X75 (ASPH) S-30, D-70

RWY 05: Thid dspicd 991'. Tower. Rgt tfc.

AIRPORT REMARKS: Unattended. For field information call 775–246–7620. Noise abatement: small acft ¾ NM S at 5414' MSL-1000' AGL; Jets and large acft 1¾ NM S at 6414' MSL-2000' AGL; extend tkfs beyond schools and residential areas.

COMMUNICATIONS: CTAF 122.9

4414 NOTAM FILE RNO

RADIO AIDS TO NAVIGATION: NOTAM FILE RNO.

MUSTANG (H) VORTACW 117.9 FMG Chan 126 N39°31.88′ W119°39.37′ 149° 18.2 NM to fld. 5949/16E.

**DENIO JUNCTION** (E85) 3 SE UTC-8(-7DT) N41°57.24′ W118°37.86′

KLAMATH FALLS

4202 FUEL MOGAS NOTAM FILE RNO

RWY 02-20: 3320X42 (DIRT)

RWY 02: Hill. RWY 20: Road.

RWY 13-31: 3430X90 (DIRT)

RWY 31: Trees.

RWY 07-25: 3100X100 (DIRT)

RWY 25: P-line.

AIRPORT REMARKS: Unattended. MOGAS avbl dalgt hrs at adjacent cafe 775–941–0371. Rwy 25 and Rwy 31 thids marked with white tires. Rwys may be soft during winter months.

**COMMUNICATIONS: CTAF 122.9** 

DERBY FLD (See LOVELOCK)

**DUCKWATER** (Ø1U) 6 SE UTC-8(-7DT) N38°51.10′ W115°38.02′

LAS VEGAS

5124 NOTAM FILE RNO

RWY 15-33: 3400X80 (DIRT)

RWY 33: Road.

RWY 03-21: 2700X75 (DIRT)

RWY 03: Road. RWY 21: Road.

AIRPORT REMARKS: Unattended. Arpt CLOSED indef. Rwy 03–21 and Rwy 15–33 overgrown unsuitable for acft use. Watch, for livestock on rwys. Rwy 03–21 and Rwy 15–33 uncontrolled vehicle access. Rwy 03–21 + 1' berm full length north side, — 2' ditch full length south side. Rwy 15–33 + 1' berm both sides of rwy. Rwy 03, 2 stakes N edge of rwy, 135' from rwy end, + 4' high. Rwy 33 P-line 1500' from rwy end + 35' both sides of centerline, marked with orange ball, 42:1 slope.

COMMUNICATIONS: CTAF 122.9

DYER (2Q9) 6 SE UTC-8(-7DT) N37°36.58' W118°00.39'

SAN FRANCISCO

4899 S4 NOTAM FILE RNO

RWY 12-30: 2870X50 (DIRT)

RWY 12: Pole. RWY 30: Trees.

AIRPORT REMARKS: Unattended. Emerg fuel only call 775–572–3059. Rwy 12 p–line marked with orange balls. Rwy 12–30 +1' berms both sides of rwy. Rwy 12–30 thld marked by white tires. NW end Rwy 12–30 width varies due to weeds. Apch Rwy 12 has weeds to 5 inches.

**COMMUNICATIONS: CTAF 122.9** 

ECHO BAY (See OVERTON)

Rwv 12-30: 2871 X 60

ELKO RGNL (EKO) 1 W UTC-8(-7DT) N40°49.50′ W115°47.50′

5140 B S4 FUEL 100, JET A TPA—See Remarks. Class II, ARFF Index A NOTAM FILE EKO

SALT LAKE CITY H-3C, L-9B, 11B IAP. AD

RWY 05-23: H7214X150 (ASPH-GRVD) S-78, D-105, ST-133, DT-170 MIRL 0.3% up NE RWY 05: VASI(V4L)-GA 3.0° TCH 43'. Road. Rgt tfc.

RWY 23: MALSR. VASI(V4L)—GA 3.25° TCH 34'. Thid dsplcd 795'. Lgtd pole.

RWY 12-30: H2871X60 (ASPH) S-12 2.0% up NW

RWY 12: Pole, Rgt tfc. RWY 30: Pole.

RUNWAY DECLARED DISTANCE INFORMATION

RWY 05: TORA-7214 TODA-7214 ASDA-7214 LDA-7214 RWY 23: TORA-7211 TODA-8211 ASDA-7211 LDA-6410

AIRPORT REMARKS: Attended 1300-0300Z‡. VASI Rwy 23 not to be used beyond 4 NM due to obstruction. PPR for all acft operations over 100,000 pounds call 775-777-7190, Rwy 23 7211' for dep: 6401' for ldg; Rwy 05 7211' for dep and ldg. TPA-6140(1000), jet acft 6640(1500). ACTIVATE MIRL Rwy 05-23, VASI Rwy 05 and Rwy 23, REIL and MALSR Rwy 23-122.7.

WEATHER DATA SOURCES: ASOS 119.275 (775) 778-9639.

COMMUNICATIONS: CTAF/UNICOM 123.0

RCO 122.6 (RENO RADIO)

SALT LAKE CENTER APP/DEP CON 132.25

RADIO AIDS TO NAVIGATION: NOTAM FILE EKO.

BULLION (L) VORW/DME 114.5 BQU Chan 92 N40°45.58' W115°45.68' 324° 4.2 NM to fld. 6464/17E. LDA/DME 108.5 I-EKO Chan 22 Rwy 23. DME unusable byd 13 NM blo 9,000'.

ELY ARPT (YELLAND FLD) (ELY) 3 NE UTC-8(-7DT) N39°17.98' W114°50.51' 6259 B S4 FUEL 100LL, JET A OX 3 Class II, ARFF Index A NOTAM FILE ELY RWY 18-36: H6018X150 (ASPH-PFC) S-70, D-85, DT-130 MIRL 0.6% up S

LAS VEGAS H-3C. L-9B ΙΔΡ

KLAMATH FALLS

RWY 18: REIL. PAPI(P4L)-GA 3.0° TCH 50'. RWY 36: REIL. PAPI(P4L)—GA 3.0° TCH 50'.

RWY 12-30: H4814X60 (ASPH) S-15 MIRL 0.4% up SE RWY 30: Tree.

AIRPORT REMARKS: Attended 1600-0100Z‡. Soft shoulders adjacent all rwys and taxiways. Rwy 12-30 not avbl for acft over 30 passenger seats. Svc charge for fuel after hours. Ultralight acft operating on Rwy 12 and in vicinity of arpt dalgt hours. ACTIVATE MIRL Rwy 12-30 and Rwy 18-36, PAPI Rwy 18 and Rwy 36, REIL Rwy 18 and Rwy 36-CTAF.

WEATHER DATA SOURCES: ASOS 120.625 (775) 289-4466.

COMMUNICATIONS: CTAF/UNICOM 122.8

RCO 122.2 (RENO RADIO)

R SALT LAKE CENTER APP/DEP CON 133.45

RADIO AIDS TO NAVIGATION: NOTAM FILE ELY.

(H) VORW/DME 110.6 ELY Chan 43 N39°17.90' W114°50.90′ at fld. 6254/14E.

VOR/DME unusable:

008°-142° byd 10 NM blo 17,500′

008°-142° bvd 20 NM

142°-163° byd 20 NM blo 11,500'

163°-293° byd 16 NM



293°-343° byd 22 NM blo 14,000' 293°-343° byd 26 NM 343°-008° byd 21 NM blo 12,000′

EMPIRE (1A8) 1 W UTC-8(-7DT) N40°34.68' W119°21.16'

NOTAM FILE RNO

RWY 18-36: 3770X42 (DIRT)

RWY 18: Rgt tfc. P-line.

RWY 07-25: 3170X48 (DIRT)

RWY 07: Rgt tfc. RWY 25: Thid dsplcd 800'. P-line.

AIRPORT REMARKS: Unattended. No tkf Rwy 07 due to p-line and ball fld lgts +50'. Rwy 25 dsplcd thid marked by 8 white tires. Rwy 18-36 thlds marked with white tires. 1' berms around all rwys.

**COMMUNICATIONS: CTAF 122.9** 

**EUREKA** (Ø5U) 6 NW UTC-8(-7DT) N39°36.25′ W116°00.30′

5954 B S4 **FUEL** 100LL, JET A NOTAM FILE RNO **RWY 17–35**: H7300X60 (ASPH–AFSC) S–30 HIRL

RWY 17: PAPI(P2L)-GA 3.0° TCH 45'.

RWY 35: PAPI(P2L)-GA 3.0° TCH 40'. P-line.

AIRPORT REMARKS: Attended 1600-0100Z‡. After hrs call out

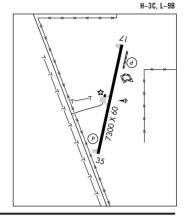
775–237–6100. HIRL Rwy 17–35 preset low ints dusk-dawn, to increase ints ACTIVATE—CTAF.

**COMMUNICATIONS: CTAF 122.9** 

RC0 122.3 (RENO RADIO)

RADIO AIDS TO NAVIGATION: NOTAM FILE EKO.

BULLION (L) VORW/DME 114.5 BQU Chan 92 N40°45.58′ W115°45.68′ 172° 70.2 NM to fld. 6464/17E.



LAS VEGAS

FALLON MUNI (FLX) 2 NE UTC-8(-7DT) N39°29.95′ W118°44.93′ 3963 B S4 FUEL 100, JET A OX 4 TPA—4763(800) NOTAM FILE RNO

RWY 03-21: H5703X75 (ASPH) S-17 MIRL

RWY 03: PAPI(P2L)—GA 3.0° TCH 49'. Thid dspicd 100'. Road. RWY 21: PAPI(P2L)—GA 3.0° TCH 40'.

RWY 13-31: 4207X100 (DIRT)

RWY 13: Trees. RWY 31: Fence.

AIRPORT REMARKS: Attended 1600–0100Z‡. Ultralight activity invof

COMMUNICATIONS: CTAF/UNICOM 122.8

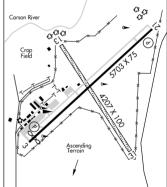
HAZEN RCO 122.1R 114.1T (RENO RADIO)

R NAVY FALLON APP/DEP CON 120.85 (Mon thru Fri 1515-0645Z‡, Sat 1800-0200Z‡, Sun 2000-0200Z‡) exc holidays.

R OAKLAND CENTER APP/CON 128.8

RADIO AIDS TO NAVIGATION: NOTAM FILE RNO.

HAZEN (L) VORTAC 114.1 HZN Chan 88 N39°30.99′ W118°59.86′ 078° 11.6 NM to fld. 4080/17E. SAN FRANCISCO
E RNO H–3B, L–9A
IAP



SAN FRANCISCO

H-3B. L-9A

UTC-8(-7DT)

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3934 B TPA—See Remarks NOTAM FILE NFL
                                                                                                             DIAP. AD
                                                               Not insp.
        RWY 13R-31L: H14005X201 (PEM)
                                         PCN 45 R/C/W/T
                                                             HIRI
          RWY 13R: PAPI(P4L)-GA 3.0° TCH 48'.
                                                     RWY 31L: PAPI(P4L)-GA 3.5° TCH 55'.
        RWY 13L-31R: H11079X200 (CONC)
                                           PCN 70 R/C/W/T
                                                              HIRL
          RWY 13L: OLS. PAPI(P4L).
                                        RWY 31R: OLS.
        RWY 07-25: H7004X154 (PEM) PCN 44 R/D/W/T
                                                         HIRI
          RWY 25. OLS
        ARRESTING GEAR/SYSTEM
          RWY 13R HOOK E28(B) (1804')
                                                                                        HOOK E28(B) (1897') RWY 31L
          RWY 13L HOOK E28(B) (952')
                                                                                         HOOK E28(B) (954') RWY 31R
          RWY 07 HOOK E28(B) (1300')
                                                                                         HOOK E28(B) (1293') RWY 35
        MILITARY SERVICE: LGT Rwy 07-25 Portable.
                                                 A-GEAR E-28(B) apch end Rwy 31R normally derigged.
          JASU 1 (GTC-85) 1(NCPP-105) 2(NC-8A)
                                                    FUEL J8, 4 hr prior notice rgr for acft reg hot refuel.
                         TRAN ALERT No transient maintenance/hanger space or de-ice avbl.
        MILITARY REMARKS: Opr Mon-Fri 1515-0645Z‡, Sat 1800-0200Z‡, Sun 2000-0200Z‡, clsd holidays. See FLIP AP/1
          Supplementary Arpt Remark. RSTD PPR 24 hr in advance for transient svc except MEDEVAC, Search and Rescue,
          deployed squadrons/CVW or scheduled logistics flight. PPR valid only 4 hr byd estimated time of arrival unless
          rescheduled, DSN 890-3415/3479, C775-426-3415/3479. CAUTION Rwy 13R centerline opr only due to
          Foreign Object Damage hazard, Radar twr 1.1 NM SW of control twr 167' AGL, Large multi-engine acft full
          stop/touch and go land past E-28 A-Gear at apch ends. Twy C, S apron to apch end Rwy 25 varies in width
          tapering to 50' wide E of Rwy 13R-31L. Twy D, S apron to apch end Rwy 07 50' wide. Extensive bird activity
          within approximately 15 NM of arpt from surface to approximately 3000' AGL, General aviation acft opr from
          Fallon Muni arpt 5 NM NNW. TFC PAT All acft activate ldg/taxi lgt while on apch. Reduced rwy separation standard
          in effect for USN/USMC acft. TPA-Initial all rwys 7600(3666), overhead break 5500(1566) no overhead for Rwy
          07 pattern altitude 5000(1066). Due to extensive traffic acft req practice apch expect lengthy delays.
          NS ABTMT When dep Rwy 31L turn rgt, heading 040°, over dep end. All a cft ctc Operations Duty Officer, DSN
          890-2419/2458, C775-426-2419/2458, prior to filing VFR, for noise sensitive area briefing. MISC Schedule of
          FRTC airspace outside of published airfield hrs will be allowed only after approval has been granted by the NAS
          Fallon Ops Officer to extd/modify published airfield hrs. Base OPS DSN 890-2419/2458, C775-426-2458.
          Logistics acft expect ASR/PAR apch.
        COMMUNICATIONS: SFA ATIS 370.925 (Mon-Fri 1515-0645Z‡, Sat 1800-0200Z‡, Sun 2000-0200Z‡, clsd
          holidays.)
      R NAVY FALLON APP/DEP CON 120.85 360.2 (Mon-Fri 1515-0645Z‡, Sat 1800-0200Z‡, Sun 2000-0200Z‡, clsd
            holidays.), other times ctc ROAKLAND CENTER APP/DEP CON 128.8 285.5
          NAVY FALLON TOWER 119.25 340.2 (Mon-Fri 1515-0645Z‡, Sat 1800-0200Z‡, Sun 2000-0200Z‡, clsd holidays.)
            GND CON 251 15
                             CINC DEL 353 55
          PMSV MFTRN 327 4
                             D 855 SAU 358
                                              DESERT CON 126.2 322.35 (Acft transient, using Fallon Range check in
            and out-call Desert Control.)
        AIRSPACE: CLASS D svc Mon-Fri 1515-0645Z‡, Sat 1800-0200Z‡, Sun 2000-0200Z‡ except holidays other times
          CLASS E.
        RADIO AIDS TO NAVIGATION: NOTAM FILE RNO.
                                        Chan 88 N39°30.99' W118°59.86'
          HAZEN (L) VORTAC 114.1 HZN
                                                                                096° 15.0 NM to fld. 4080/17E.
          (H) TACAN Chan 82 NFL (113.5) N39°25.01′ W118°42.29′ at fld. 3929/16E.
          ASR/PAR
        COMM/NAV/WEATHER REMARKS: Radar see Terminal FLIP for Radar Minima. Inbound transient helicopter ctc Tower 5 min
          prior to entering CLASS D airspace for entry procedure.
FERNLEY
     TIGER FLD (N58) 3S UTC-8(-7DT) N39°33.58′ W119°14.49′
                                                                                                        SAN FRANCISCO
        4346 NOTAM FILE RNO
                                                                                                                L-9A
        RWY 15-33: H3974X40 (ASPH)
          RWY 15: Rgt tfc.
                               RWY 33: Hill.
        RWY 05-23: 2750X40 (GRVL)
          RWY 05: Road
                              RWY 23. Hill
        AIRPORT REMARKS: Unattended. Rwy 15-33 multiple cracks wider than 3 inches on rwy.
        COMMUNICATIONS: CTAF 122 9
        RADIO AIDS TO NAVIGATION: NOTAM FILE RNO.
          HAZEN (L) VORTAC 114.1 HZN
                                       Chan 88 N39°30.99' W118°59.86'
                                                                                266° 11.6 NM to fld. 4080/17E.
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FALLON NAS (VAN VOORHIS FLD)

N39°25.00' W118°42.06'

(NFL)(KNFL)

NAS

3 NE

GABBS (GAB) 4 NW UTC-8(-7DT) N38°55.45′ W117°57.54′

LAS VEGAS

4700 B NOTAM FILE RNO RWY 08-26: 5900X65 (DIRT)

RWY 16-34: 2800X65 (DIRT)

AIRPORT REMARKS: Unattended. Rwy 08–26 and Rwy 16–34 no line of sight between runways. Recommend land Rwy 08, takeoff Rwy 26 wind permitting. Rwy 08–26 weeds +1' full length of rwy. Rwy 16–34 weeds +1' full length of rwy.

COMMUNICATIONS: CTAF 122.9

#### GOI DEIFI D

LIDA JUNCTION (ØL4) 14 S UTC-8(-7DT) N37°29.15′ W117°11.45′

LAS VEGAS

4684 NOTAM FILE RNO

RWY 18-36: 6100X80 (DIRT)

RWY 18: Tree.

AIRPORT REMARKS: Unattended. Rwy 18–36 has uncontrolled vehicle access. +30′ pole 408′ from thId Rwy 18 on centerline extended. Rwy 18–36 edges marked with white tires.

COMMUNICATIONS: CTAF 122.9

HAWTHORNE INDUSTRIAL (HTH) 1 N UTC-8(-7DT) N38°32.66′ W118°38.06′

SAN FRANCISCO

4215 B FUEL 100, JET A NOTAM FILE HTH

RWY 10-28: H6000X100 (ASPH) S-53, D-93, ST-118, DT-160

MIRL

RWY 10: REIL. RWY 28: REIL. PAPI(P2L)—GA 3.0° TCH 49'.

RWY 15-33: 3500X130 (DIRT)

RWY 15: Railroad.

AIRPORT REMARKS: Unattended. Ultralight activity on and invof arpt. Rwy 33 starts at north edge Rwy 10–28. ACTIVATE MIRL Rwy 10–28—CTAF 122.8.

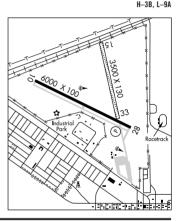
**WEATHER DATA SOURCES:** AWOS-3 120.225 (775) 945-0727.

COMMUNICATIONS: CTAF/UNICOM 122.8

HAZEN RCO 122.1R 114.1T (RENO RADIO)

RADIO AIDS TO NAVIGATION: NOTAM FILE RNO.

MINA (H) VORTAC 115.1 MVA Chan 98 N38°33.92′ W118°01.97′ 251° 28.3 NM to fld. 7860/17E. HIWAS.



**HAZEN** N39°30.99′ W118°59.86′ NOTAM FILE RNO.

SAN FRANCISCO H-3B, L-9A

(L) **VORTAC** 114.1 HZN Chan 88 078° 11.6 NM to Fallon Muni. 4080/17E.

VOR unusable 300°-320° beyond 30 NM below 9500'.

RCO 122.1R 114.1T (RENO RADIO)

#### HENDERSON EXECUTIVE (See LAS VEGAS)

JACKPOT/HAYDEN FLD (Ø6U) O E UTC-7(-6DT) N41°58.56′ W114°39.49′

SALT LAKE CITY

5213 B **FUEL** 100LL NOTAM FILE RNO

**RWY 15-33**: H6200X60 (ASPH) S-12.5 MIRL

H-3C, L-11C

RWY 15: Building. RWY 33: VASI(V2L)—GA 3.5° TCH 55'. Hill.

AIRPORT REMARKS: Attended on call. Attended by Casino on call at 775–755–6595 or use frequency 122.8. For fuel call 775–755–6595 or use frequency 122.8. Bird hazard east of arpt at ponds. Bcn visibility lgtd from west. ACTIVATE MIRL Rwy 15–33—CTAF.

COMMUNICATIONS: CTAF/UNICOM 122.8

RC0 122.5 (RENO RADIO)

RADIO AIDS TO NAVIGATION: NOTAM FILE TWF.

TWIN FALLS (L) VORTACW 115.8 TWF Chan 105 N42°28.79' W114°29.37' 176° 31.1 NM to fld. 4140/18E.

NFVANA 247

JEAN (ØL7) 1 S UTC-8(-7DT) N35°46.10' W115°19.78'

2832 B FUEL 100LL, JET A TPA-3632(800) NOTAM FILE RNO

LAS VEGAS 1-7F

RWY 02L-20R: H4600X75 (ASPH) S-12.5 MIRL

RWY 02L: Pole. RWY 20R: Road. Rgt tfc. RWY 02R-20L: H3700X60 (ASPH) S-12.5

RWY 02R: Rgt tfc.

RWY 20L: Pole.

AIRPORT REMARKS: Unattended. Self-svc fuel 24 hours. Parachute Jumping. Skydiving drop zone 4 miles south. Ultralight activity on arpt. Aerobatic activities 2 miles W. Power acft use tfc pattern West of rwy; make entry from West. Power acft parking W side of fld. Glider parking E side of fld. ACTIVATE MIRL Rwy O2L-20R—CTAF. NOTE:

See Special Notice—Aerobatic Practice Area Jean Airport, Jean, NV.

**COMMUNICATIONS: CTAF 122.9** 

RADIO AIDS TO NAVIGATION: NOTAM FILE LAS.

LAS VEGAS (H) VORTACW 116.9 LAS Chan 116 N36°04.78' W115°09.59' 189° 20.4 NM to fld. 2141/15E.

KIDWELL (See CAL NEV ARI)

KINGSTON (N15) 2 E UTC-8(-7DT) N39°12.18′ W117°03.87′ LAS VEGAS

5950 E NOTAM FILE RNO

RWY 07-25: 3700X80 (GRVL-DIRT)

RWY 16-34: 3072X60 (GRVL-DIRT)

RWY 16: P-line. RWY 34: P-line. Rgt tfc.

AIRPORT REMARKS: Unattended. Rwy 07-25 edge and thid marked by white tires. Rwy 16 thid marked by white tires. Rwy 16-34 surface covered with weeds and grass to 1'.

COMMUNICATIONS: CTAF 122.9

LAKE TAHOE (See SOUTH LAKE TAHOE, CA)

LAS VEGAS N36°04.78′ W115°09.59′ NOTAM FILE LAS. LAS VEGAS

(H) VORTACW 116.9 LAS Chan 116 at McCarran Intl. 2141/15E. H-4H. L-7E

VORTAC unusable:

RC0 122.4 (RENO RADIO)

025°-160° bvd 20 NM blo 6.000' 160°-200° byd 20 NM blo 9,000′ 200°-220° bvd 15 NM blo 9.000′ 200°-025° byd 25 NM blo 11,000′ 220°-245° bvd 35 NM blo 15.000' 245°-260° byd 35 NM blo 14,000′ 260°-275° bvd 35 NM blo 14.000' 275°-310° byd 35 NM blo 16,500′

#### LAS VEGAS

HENDERSON EXECUTIVE (HND) 11 S UTC-8(-7DT) N35°58.37' W115°08.07' 2492 B FUEL 100LL, JET A OX 1, 2 TPA—3492(1000) NOTAM FILE HND

RWY 17R-35L: H6501X100 (ASPH) S-30, D-60 MIRL 1.4% up S

RWY 17R: REIL. PAPI(P4L)—GA 3.0° TCH 40'.

RWY 35L: REIL. PAPI(P4L)—GA 3.5° TCH 40'. Road.

RWY 17L-35R: H5001X75 (ASPH) S-30, D-30 MIRL 1.4% up S RWY 17L: REIL. PAPI(P4L)—GA 3.0°.

RWY 35R: REIL. PAPI(P4L)—GA 3.5°. Hill.

AIRPORT REMARKS: Attended 1300–0600Z‡. Self–svc fuel 100LL 24 hrs. Rwy 17L–35R is CLOSED 0400–1500Z‡. Extensive commercial air tour traffic arriving from SE at different times during dalgt hours. Acft departure Rwy 17R or Rwy 35L should verify that they are taking off from the rwy and not the parallel twy. PAPI Rwy 17L and Rwy 35R OTS indef. PAPI Rwy 35L OTS indef. MIRI Rwy 17L–35R OTS unless Rwy 17R–35L is clsd. ACTIVATE MIRL Rwy 17R–35L and Rwy 17L–35R, PAPI Rwy 17R and Rwy 35L, PAPI Rwy 17L and Rwy 35R REIL Rwy 17R and 35L REIL Rwy 17L and 35R and twy—CTAF. REIL Rwy 17L and 35R avbl only when Rwy 17R and 35L clsd.

WEATHER DATA SOURCES: ASOS 120.775 (702) 614-4537.

COMMUNICATIONS: CTAF 125.1 ATIS 120.775 (702) 614-4537 Unicom 122.95

MOUNT POTOSI RCO 122.35 (RENO RADIO)

R LAS VEGAS APP/DEP CON 118.4

TOWER 125.1 (1400-0400Z‡) GND CON 127.8

AIRSPACE: CLASS D svc 1400-0400Z‡ other times CLASS G.

RADIO AIDS TO NAVIGATION: NOTAM FILE RNO.

BOULDER CITY (H) VORTACW 116.7 BLD Chan 114 N35°59.75′ W114°51.82′ 249° 13.3 NM to fld. 3650/15E. HIWAS.

35L

LAS VEGAS

H-4H. L-7E

IAP, AD

McCARRAN INTL (LAS) 5 S UTC-8(-7DT) N36°04.80' W115°09.14'

2181 B S4 FUEL 100, 100LL, JET A1 + OX 1, 2, 3 LRA Class I, ARFF Index E

LAS VEGAS H-41, L-7E IAP, AD

RWY 07L-25R: H14510X150 (ASPH-PFC) S-23, D-220, ST-175, DT-633, DDT-877 HIRL

**RWY 07L:** PAPI(P4L)—GA  $3.0^{\circ}$  TCH 75'. Thid dsplcd 2139'. Hangar. 1.1% down.

**RWY 25R:** MALSR. PAPI(P4L)—GA 3.0° TCH 84'. Thid dspicd 1397'.

**RWY 07R-25L**: H10526X150 (ASPH-PFC) S-23, D-220, ST-175, DT-633, DDT-914 HIRL

RWY 07R: REIL. PAPI(P4L)—GA 3.0° TCH 64'. Pole. 1.1% down. RWY 25L: MALSF. PAPI(P4L)—GA 3.0° TCH 84'. 0.9% up.

**RWY 01R-19L:** H9775X150 (CONC-GRVD) S-23, D-220, ST-175,

DT-633, DDT-877 MIRL RWY 01R: REIL. PAPI(P4L)—GA 3.0° TCH 75'. Thid dspied 491'.

Railroad. Rgt tfc. 1.1% down.

RWY 19L: REIL. PAPI(P4L)—GA 3.0° TCH 75'. Thid dsplcd 878'.

Pole 0.9% up.

RWY 01L-19R: H8985X150 (CONC-GRVD) S-30, D-145, ST-175, DT-460, DDT-833 HIRL

RWY 01L: REIL. MALSF. PAPI(P4L)—GA 3.40° TCH 57'. Thid dspicd 584'. Railroad. 1.1% down.

**RWY 19R:** REIL. PAPI(P4L)—GA 3.0° TCH 75'. Fence. Rgt tfc. 1.0% up.



#### RUNWAY DECLARED DISTANCE INFORMATION

RWY 01L:	TORA-8985	TODA-8985	ASDA-8985	LDA-8401
RWY 01R:	TORA-9775	TODA-10172	ASDA-9441	LDA-8681
RWY 07L:	TORA-14510	TODA-15099	ASDA-14099	LDA-11966
RWY 19L:	TORA-9775	TODA-10175	ASDA-9685	LDA-8745
RWY 19R:	TORA-8985	TODA-9397	ASDA-8397	LDA-8397
RWY 25R:	TORA-14510	TODA-15155	ASDA-14155	LDA-12755

AIRPORT REMARKS: Attended continuously, Large numbers of birds and bats invof arpt btn SS-SR, Lgtd golf range 1400' south of Rwy 01R-19L and Rwy 01L-19R. Extensive glider/soaring ops weekends and holidays, SR-SS, LAS 187/020, altitudes up to but not including FL 180. Gliders remain clear of the terminal control area but otherwise opr within the entire southwest quadrant of the terminal control area Veil. Acft may experience reflection of sun from glass hotels located northwest of arpt. Reflection may occur at various altitudes, headings and distances from arpt. Numerous helicopter ops on W side of arpt. Rwy 01L-19R 496,000 lbs GWT for L-1011, 555,000 lbs GWT for DC-10, 602,500 lbs GWT for MD-11. Acft using full length dep on Rwy 07L use minimal power until passing the power-up point on rwy. Power-up point is 348' east of blast pad and marked with sign and standard markings for beginning of rwy. Turbojet dep not permitted Rwy 01R-19L or Rwy 01L-19R 0400–1600Z++. Exception for weather or operational necessity. All non–standard rwy ops PPR from Department of Aviation. Acft taxiing westbound on Twy B near Twy E use caution not to enter the rwy on Twy Y, acft taxiing westbound on Twy W near Twy E use caution not to enter the rwy on Twy W. Twy C no centerline Igts west of Twy B4, has edge lgts on south side of twy in this area. Directional twy signs will be incomplete due to construction. Acft larger than B757 PPR from Department of Aviation to use Twy H. Ops all terminal gates and cargo ramp controlled by Department of Aviation 1400-1000Z‡. All acft ctc ramp control on freq 129.175 for ops at A, B, C gates and charter intl gates, ctc Ramp Con on freq 127.9 for ops at D gates and cargo ramp prior to entering ramp or pushing back from gate or parking spot. From 1000-1400Z‡ ctc Gnd Con on freq 121.1 for ops at all gates and cargo ramp. Aircraft operating near the intersection of Twys S, D, G and the north end of Twy Z should be alert as there are closely aligned twy centerlines and radius turns. Acft that dep full length of Rwy 01L and Rwy 07L must hold at the same hold line, as there is no room to hold between the rwy ends, and such acft should verify that they are on the correct rwy. Acft dep Rwy 19R use minimal power passing the rwy thld. Rwy 19R thld has std rwy markings and is 780' south of the blast pad. Landing Rights Airport: Customs avbl to general aviation acft 1600-0600Z‡, all other times PPR call 702-261-5539. General aviation acft requiring immigration/customs services must ctc Department of Aviation for parking arrangements minimum 2 hrs prior to arrival 702-261-3500 1500-0000Z++, all other times 702-261-4411. General aviation parking very limited. For parking availability ctc either FBO 702-736-1830 or 702-739-1100. Rotating bcn not visible 115°-240° southeast to southwest from twr. Rwy O7R REIL OTS indef. Tiedown fee. General aviation customs and immigration located west side of airfield between FBO's. Flight Notification Service (ADUCS) avbl. NOTE: See Special Notices—Intersection Departures During Period of Darkness, Grand Canyon Special Flight Rules Area.

#### **CONTINUED ON NEXT PAGE**

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WEATHER DATA SOURCES: ASOS (702) 736-1416.

COMMUNICATIONS: D-ATIS 132.4 (702) 736-0950. UNICOM 122.95

(R) LAS VEGAS APP CON 125.025

(R) LAS VEGAS DEP CON 125.9 (South)

LAS VEGAS TOWER 119.9 (Rwy 07L-25R and Rwy 07R-25L) 118.75 (Rwy 01L-19R and Rwy 01R-19L)

AIRSPACE: CLASS B See VFR Terminal Area Chart.

RADIO AIDS TO NAVIGATION: NOTAM FILE LAS.

LAS VEGAS (H) VORTACW 116.9 LAS Chan 116 N36°04.78' W115°09.59' at fld 2141/15F

ILS/DME 110.3 I-LAS Chan 40 Rwy 25R.

ILS 111.75 I-RLE Rwy 25L. Class IT. LOC unusable byd 19° south of course.

ILS 110.1 I-CUA Chan 38 Rwy 01L Class IB. LOC unusable byd 30° left of course, LOC unusable within 2 NM from thld

**NORTH LAS VEGAS** (VGT) 3 NW UTC-8(-7DT) N36°12.64′ W115°11.67′

2205 B S4 FUEL 100LL, JET A TPA-3005(800) NOTAM FILE VGT

Class III. ARFF Index A. H-4H, L-7E IAP. AD

LAS VEGAS

KLAMATH FALLS

RWY 07-25: H5004X75 (ASPH) S-30 MIRL 0.6% up W

RWY 07: PAPI(P4L)-GA 3.0° TCH 37'. Pole. RWY 25: PAPI(P4L)-GA 3.0° TCH 36'.

RWY 12R-30L: H5000X75 (ASPH) S-30 MIRL 0.8% up NW

RWY 12R: PAPI(P4L)-GA 3.0° TCH 25'. Building.

RWY 30L: MIRL, PAPI(P4L)-GA 3.0° TCH 45', P-line.

RWY 12L-30R: H4202X75 (ASPH) S-30 MIRL 1.0% up NW RWY 12L: PAPI(P4L)—GA 3.0° TCH 40', Bldg.

RWY 30R: PAPI(P4L)—GA 3.0° TCH 40', Thid dsplcd 202', P-line.

LAND AND HOLD SHORT OPERATIONS

HOLD SHORT POINT LANDING DIST AVRI **RWY 25** 12R-30L 4000 RWY 301 07-25 4000

AIRPORT REMARKS: Attended 1400-0600Z‡. Rwy 07-25 and Rwy 12L-30R and Rwy 12R-30L have aiming point marking at 1000' on all runways. Rwy guard lights at all intersections. Twy R clsd indef. When twr clsd ACTIVATE MIRL Rwy 07-25 and Rwy 12L-30R and twy Igts.-CTAF. Rwys 12L and 30R PAPI OTS indef.

WEATHER DATA SOURCES: ASOS 118.05 (702) 648-6633. LAWRS.

COMMUNICATIONS: CTAF 125.7 ATIS 118.05 UNICOM 122.95

NELLIS APP CON 118.125 (Rwv 12) LAS VEGAS DEP CON 119.4 (Rwy 12)

LAS VEGAS APP/DEP CON 119.4 (Rwy 30)

TOWER 125.7 (Oct-Mar 1400-0400Z‡, Apr-Sep 1400-0500Z‡) CLNC DEL 124.0 GND CON 121.7

AIRSPACE: CLASS D svc Oct-Mar 1400-0400Z‡, Apr-Sep 1400-0500Z‡ other times CLASS G.

RADIO AIDS TO NAVIGATION: NOTAM FILE LAS.

LAS VEGAS (H) VORTACW 116.9 LAS Chan 116 N36°04.78' W115°09.59' 333° 8.2 NM to fld. 2141/15E.

ILS/DME 110.7 I-HWG Chan 44 Rwy 12L. Class IT. ILS unmonitored when twr clsd.

LIDA JUNCTION (See GOLDFIELD)

LINCOLN CO (See PANACA)

LOVELOCK N40°07.49' W118°34.66' NOTAM FILE LOL.

H-3B, L-9A, 11A

(L) VORTACW 116.5 LLC Chan 112 155° 3.6 NM to Derby Fld. 4784/16E. HIWAS. VORTAC unusable:

225°-235° byd 25 NM blo 9,600'

260°-305° byd 25 NM blo 13,000' 235°-260° bvd 15 NM blo 15.500' 340°-360° bvd 25 NM blo 10.500'

RC0 122.4 (RENO RADIO)

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WEATHER DATA SOURCES: ASOS (702) 736-1416.

COMMUNICATIONS: D-ATIS 132.4 (702) 736-0950. UNICOM 122.95

(R) LAS VEGAS APP CON 125.025

(R) LAS VEGAS DEP CON 125.9 (South)

LAS VEGAS TOWER 119.9 (Rwy 07L-25R and Rwy 07R-25L) 118.75 (Rwy 01L-19R and Rwy 01R-19L)

AIRSPACE: CLASS B See VFR Terminal Area Chart.

RADIO AIDS TO NAVIGATION: NOTAM FILE LAS.

LAS VEGAS (H) VORTACW 116.9 LAS Chan 116 N36°04.78' W115°09.59' at fld 2141/15F

ILS/DME 110.3 I-LAS Chan 40 Rwy 25R.

ILS 111.75 I-RLE Rwy 25L. Class IT. LOC unusable byd 19° south of course.

ILS 110.1 I-CUA Chan 38 Rwy 01L Class IB. LOC unusable byd 30° left of course, LOC unusable within 2 NM from thld

**NORTH LAS VEGAS** (VGT) 3 NW UTC-8(-7DT) N36°12.64′ W115°11.67′

2205 B S4 FUEL 100LL, JET A TPA-3005(800) NOTAM FILE VGT

Class III. ARFF Index A. H-4H, L-7E IAP. AD

LAS VEGAS

KLAMATH FALLS

RWY 07-25: H5004X75 (ASPH) S-30 MIRL 0.6% up W

RWY 07: PAPI(P4L)-GA 3.0° TCH 37'. Pole. RWY 25: PAPI(P4L)-GA 3.0° TCH 36'.

RWY 12R-30L: H5000X75 (ASPH) S-30 MIRL 0.8% up NW

RWY 12R: PAPI(P4L)-GA 3.0° TCH 25'. Building.

RWY 30L: MIRL, PAPI(P4L)-GA 3.0° TCH 45', P-line.

RWY 12L-30R: H4202X75 (ASPH) S-30 MIRL 1.0% up NW RWY 12L: PAPI(P4L)—GA 3.0° TCH 40', Bldg.

RWY 30R: PAPI(P4L)—GA 3.0° TCH 40', Thid dsplcd 202', P-line.

LAND AND HOLD SHORT OPERATIONS

HOLD SHORT POINT LANDING DIST AVRI **RWY 25** 12R-30L 4000 RWY 301 07-25 4000

AIRPORT REMARKS: Attended 1400-0600Z‡. Rwy 07-25 and Rwy 12L-30R and Rwy 12R-30L have aiming point marking at 1000' on all runways. Rwy guard lights at all intersections. Twy R clsd indef. When twr clsd ACTIVATE MIRL Rwy 07-25 and Rwy 12L-30R and twy Igts.-CTAF. Rwys 12L and 30R PAPI OTS indef.

WEATHER DATA SOURCES: ASOS 118.05 (702) 648-6633. LAWRS.

COMMUNICATIONS: CTAF 125.7 ATIS 118.05 UNICOM 122.95

NELLIS APP CON 118.125 (Rwv 12) LAS VEGAS DEP CON 119.4 (Rwy 12)

LAS VEGAS APP/DEP CON 119.4 (Rwy 30)

TOWER 125.7 (Oct-Mar 1400-0400Z‡, Apr-Sep 1400-0500Z‡) CLNC DEL 124.0 GND CON 121.7

AIRSPACE: CLASS D svc Oct-Mar 1400-0400Z‡, Apr-Sep 1400-0500Z‡ other times CLASS G.

RADIO AIDS TO NAVIGATION: NOTAM FILE LAS.

LAS VEGAS (H) VORTACW 116.9 LAS Chan 116 N36°04.78' W115°09.59' 333° 8.2 NM to fld. 2141/15E.

ILS/DME 110.7 I-HWG Chan 44 Rwy 12L. Class IT. ILS unmonitored when twr clsd.

LIDA JUNCTION (See GOLDFIELD)

LINCOLN CO (See PANACA)

LOVELOCK N40°07.49' W118°34.66' NOTAM FILE LOL.

H-3B, L-9A, 11A

(L) VORTACW 116.5 LLC Chan 112 155° 3.6 NM to Derby Fld. 4784/16E. HIWAS. VORTAC unusable:

225°-235° byd 25 NM blo 9,600'

260°-305° byd 25 NM blo 13,000' 235°-260° bvd 15 NM blo 15.500' 340°-360° bvd 25 NM blo 10.500'

RC0 122.4 (RENO RADIO)

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#### LOVELOCK

DERBY FLD (LOL) 8 SW UTC-8(-7DT) N40°03.99' W118°33.91'

3904 B FUEL 100LL TPA-4704(800) NOTAM FILE LOL

RWY 01-19: H5529X75 (ASPH) S-30 MIRL

RWY 01: REIL. VASI (V2L)-GA 3.0° TCH 40'.

RWY 19: REIL. VASI(V2L)—GA 3.0° TCH 40'. Fence.

RWY 07-25: H4922X75 (ASPH) S-17

RWY 25: Thid dsplcd 120'. Fence

AIRPORT REMARKS: Unattended. Fuel 24 hr self svc. Rwy 01–19 no line of sight between runways. ACTIVATE MIRL Rwy 01–19, and REIL Rwy 01 and Rwy 19—CTAF.

WEATHER DATA SOURCES: ASOS 120.675 HIWAS 116.5 LLC.

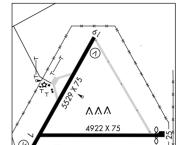
COMMUNICATIONS: CTAF/UNICOM 122.8

LOVELOCK RCO 122.4 (RENO RADIO)

OAKLAND CENTER APP/DEP CON 128.8

RADIO AIDS TO NAVIGATION: NOTAM FILE LOL.

LOVELOCK (L) VORTACW 116.5 LLC Chan 112 N40°07.49′ W118°34.66′ 155° 3.6 NM to fld. 4784/16E. HIWAS.



McCARRAN INTL (See LAS VEGAS)

MERCURY N36°37.65′ W116°01.65′ NOTAM FILE RNO.

NDB (HW) 326  $\,$  MCY  $\,$  275° 39.2 NM to Beatty. SHUTDOWN. NDB unusable 290°–070°.

LAS VEGAS L-9B

LAS VEGAS

KLAMATH FALLS

H-3B, L-9A, 11A

ΙΔΡ

**MESQUITE** (67L) 2N UTC-8(-7DT) N36°49.99' W114°03.35' 1978 B **FUEL** 100LL, JET A NOTAM FILE RNO

RWY 01-19: H5121X75 (ASPH) S-30 MIRL

RWY 01: REIL. PAPI(P2L)—GA 3.0° TCH 40'.

RWY: 19: REIL. PAPI(P2L)—GA 3.0° TCH 40'. Hill.

AIRPORT REMARKS: Attended 1500–0100Z‡. Credit card fuel avbl.

Parachute Jumping. Rwy 01–19 severe drop off –20' 90' right and parallel to centerline. Golf courses and driving ranges within 1000' of rwy centerline. Noise abatement procedure avoid flying over downtown Mesquite located 2NM SW of arpt. ACTIVATE MIRL

COMMUNICATIONS: CTAF/UNICOM 122.8

(R) L.A. CENTER APP/DEP CON 124.2

Rwv 01-19-CTAF

RADIO AIDS TO NAVIGATION: NOTAM FILE RNO.

MORMON MESA (L) VORTAC 114.3 MMM Chan 90 N36°46.16′ W114°16.65′ 054° 11.3 NM to fld. 2120/16E. HIWAS.

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HELIPAD H1: H20X20 (CONC)

HELIPORT REMARKS: Rwy H1 has 15' building 50' SW of pad.

Golf Course

Golf Course

Golf Course

Golf Course

MINA N38°33.92′ W118°01.97′ NOTAM FILE RNO.

SAN FRANCISCO H-3B. L-9A

(H) VORTAC 115.1 MVA Chan 98 251° 28.3 NM to Hawthorne Industrial. 7860/17E. HIWAS. VORTAC unusable 130°-160° beyond 28 NM below 10,700'.

RCO 122.1R 115.1T (RENO RADIO)

MINA (3QØ) 0 SE UTC-8(-7DT) N38°23.00′ W118°06.06′

SAN FRANCISCO

4552 NOTAM FILE RNO

RWY 13-31: 4600X165 (DIRT)

AIRPORT REMARKS: Unattended. Remote controlled acft invof arpt. Rwy 13–31 has uncontrolled vehicle access.

Ultralights on and invof arpt. Mountains 1 mile E of fld. Rwy 13 and Rwy 31 thld marked with white tires. Rwy 13–31 has 2' berms on both sides full length of rwy.

COMMUNICATIONS: CTAF 122.9

MINDEN-TAHOE (MEV) 4 N UTC-8(-7DT) N39°00.06′ W119°45.12′

4722 B S4 FUEL 100LL, JET A OX 1, 3 NOTAM FILE MEV

RWY 16-34: H7400X100 (ASPH) S-30, D-50 MIRI

RWY 16: VASI(V4R)-GA 3.0° TCH 31'. Rgt tfc.

RWY 34: VASI(V4L)-GA 3.0° TCH 31'.

S-30, D-50 0.4% up SE RWY 12-30: H5300X75 (ASPH) RWY 12: Pole. Rgt tfc.

RWY 12G-30G: 2200X60 (DIRT)

RWY 12G: Brush.

AIRPORT REMARKS: Attended 1600-0000Z‡. Parachute Jumping. Deer and flocks of large birds on and in vicinity of arpt. Rwy 12G-30G thid marked with orange and white panels. Ultralight and balloon activity on and invof arpt. Parachute jumping and Glider activity on and invof arpt. For emergencies after 0000Z‡ hrs ctc 775-782-9911. Trees 1,000' from apch end Rwy 12. Ditch in obstacle free zone adjacent SW end Twy C. PAEW occasionally on rwys and twys. Noise abatement procedures in effect, for information ctc 775-782-9871. Sailplane tfc pattern Rwy 30 and Rwy 34 rgt tfc. Snow removal during dalgt hours only. Rwy 30G Idgs only; no tkf or Idg Rwy 12G. ACTIVATE MIRL Rwy 16-34, VASI Rwv 16 and Rwv 34-CTAF, NOTE: See Special Notices-Glider/Soaring Activities Around the Reno-Tahoe

International Airport. WEATHER DATA SOURCES: AWOS-3 119.325 (775) 782-6264.

COMMUNICATIONS: CTAF/UNICOM 123 05

RENO APP/DEP CON 119.2

RADIO AIDS TO NAVIGATION: NOTAM FILE MEV.

MUSTANG (H) VORTACW 117.9 FMG Chan 126 N39°31.88′ W119°39.37′ 172° 32.1 NM to fld. 5949/16E. COMM/NAV/WEATHER REMARKS: For cinc del call Reno apch con on (775) 348-8840.

MORMON MESA N36°46.16′ W114°16.65′ NOTAM FILE RNO.

LAS VEGAS H-41, L-9B

SAN FRANCISCO

H-3B. L-9A

ΙΔΡ

(L) VORTAC 114.3 MMM Chan 90 198° 14.5 NM to Perkins Fld. 2120/16E. HIWAS. VORTAC unusable:

060°-075° beyond 27 NM below 9500' 075°-110° beyond 32 NM below 9600'

110°-135° beyond 10 NM 280°-335° beyond 22 NM below 9000'

RCO 122.1R 114.3T (RENO RADIO)

MOUNT LEWIS N40°24.18' W116°52.09'

RCO 122.65 (RENO RADIO)

SALT LAKE CITY H-3C, L-9B

MOUNT POTOSI N35°56.65' W115°29.87'

RCO 122.35 (RENO RADIO)

LAS VEGAS

MUSTANG N39°31.88′ W119°39.37′ NOTAM FILE RNO.

SAN FRANCISCO

117.9 FMG Chan 126 234° 5.5 NM to Reno/Tahoe Intl. 5949/16E.

L-7D

VORTAC unusable 200-230° beyond 30 NM below 13,000'

H-3B. L-9A

NELLIS AFR (LSV)(KLSV) AF 7 NE UTC-8(-7DT) N36°14.17′ W115°02.06′ LAS VEGAS 1870 B TPA-See Remarks NOTAM FILE LSV Not Insp H-41 I-7F RWY 03L-21R: H10123X200 (CONC) DIAP. AD PCN 43 R/C/W/T HIRI RWY N3I · PAPI — GA 3 0° RWY 21R: PAPI-GA 3.0°. Rgt tfc. 0.3% down. RWY 03R-21L: H10055X150 (CONC) PCN 52 R/C/W/T HIRL RWY 03R: ALSF1. PAPI-GA 3.0°. RWY 21L: ALSF1. PAPI-GA 3.0°. Rgt tfc. 0.4% down. MATSAS/AND SUITSANAN RWY 03L HOOK BAK-12B(B) (40' OVRN) HOOK BAK-12B(B) (1210') HOOK BAK-12B(B) (1452') HOOK BAK-12B(B) (42' OVRN) RWY 21R RWY 03R HOOK BAK-12(B) (37' OVRN) HOOK BAK-12B(B) (1225') HOOK BAK-12B(B) (1199') HOOK BAK-12B(B) (46' OVRN) RWY 21L MILITARY SERVICE: LGT All rwy thId Igts gated. Rwy 21L PAPI Rwy Reference Point and ILS Rwy Point of Intercept not coincidental. All sequence flashing lgts on Rwy 21L. 1.5' to right of extended centerline. A-GEAR ALL BAK-12B extended and in raised position, rgr 15 minute prior notice for removal. JASU No starter unit or starting capability for F4B, F4J acft, No starter probe for USN acft, 2(MA-1A) FUEL J8, Fuel will not be ordered until FLUID W. Expect 2-3 hr delay. SP PRESAIR LHOX LOX 0IL 0-123-128-132-133-148-156 TRAN ALERT Opr 1430-0630Z‡, no quick turn Fri-Sun. No military fleet svc avbl, limited transient svc avbl. No transient acft can arr/dep prior to 1430Z‡ and must arr/dep no later than 0600Z‡. Fleet svc is avbl from Signature Flight Support C702-261-3583/3529, 48 hr prior notice rgr. Progressive taxi avbl. MILITARY REMARKS: See FLIP AP/1 Supplementary Arpt Remarks, RSTD PPR all except Distinguished Visitor code 7 or aby and emergency AIREVAC, PPR issued 1430-0630Z‡. Remain overnight reg good for one night only. Acft

must adhere to PPR arr block +/- 60 minutes of scheduled ldg. Extensive Large Force Exercise (LFE) activity. PPR arr not authorized during Red Flag (RF) or LFE launch/recovery period, check NOTAM for date/time. No PPR arr during night RF/LFE opr. Multi apch not authorized during RF/LFE or after official SS unless approved by 57 WG SOF PPR's may be obtained up to 7 days prior to planned arr. Reg for additional acft from a base that has met the maximum allowed (4) will be considered 3 days prior to scheduled arr, support and space permission. During RF/LFE periods, PPR's may be req up to 7 days prior to arr but issued no earlier than 24 hrs prior to planned arr. All inbound passenger/cargo and Distinguished Visitor acft must ctc Command Post no later than 30 min prior to Idg. PPR for transient fighter/Distinguished Visitor acft ctc AM OPS DSN 682-4600/01. C702-652-4600. PPR for exercise, deployment, C130 and larger acft ctc Nellis Support Center DSN 682-5250/5231 Mon-Fri 1430-0030Z‡. Sun and holiday tfc expect arr from N, dep N winds permitting with tfc pattern towards E (Sunrise Mt). Acft with VIP 7 or higher ctc PTD when 100 NM out. Opr rstd during Bird Watch Condition Moderate (tkf or ldg permission only when dep and arr avoid identified bird activity, no local IFR/VFR tfc pattern activity) and Severe (tkf and ldg prohibited without OG/CC or designated official approval). Hot Cargo Pad unlit and rstd to daylight/VFR ops. CAUTION Parachute Jumping. Steeply rising terrain S and E of centerline rwy 03R-21L. Rwy 03L-21R has high potential for hydroplaning. 200' cranes N of dep end Rwy 03L. Acft taxiing on Twy D between Twy F and Rwy 21R use caution, 4'8" high distance remaining marker located 125' N Twy D centerline. IFC PAT TPA—Rectangular 3000(1130), overhead 3500(1630). Acft dep will not climb above 3000' until past the dep end of rwy. NS ABTMT ACC quiet hr policy in effect 0630-1400Z‡. MISC First 1320' Rwy 21R and first 920' Rwy 03L grooved concrete. Mid 7879' Rwy 03L-21R center 80' concrete, balance asphalt. Acft dep on radar vectors must maintain 300' per NM minimum climb. E side 9000'-1000' distance remaining markers Rwy 21L not avbl. Transient acft shall communicate with Nellis ATC facility on UHF to the maximum extent possible due to heavy concentration of acft in the VFR pattern. Reduced Same Runway Separation will be applied to base assign/deployed acft in accordance with NAFBI 11-250, see (https://wwwmil.nellis.af.mil/units/99cs/scs/) see NAFBI 11-250.pdf. Wx opr 0700Z‡ Mon thru 2300Z‡ Fri, clsd weekends and holidays. Wx obsn view of Rwy O3R and O3L apch end rstd by flight facility; obsn view rstd fr 190°-330° by flightline facility and buildings; night obsn ltd due to high ints ramp lgt. Wx brief for tran aircrews byd normal opr hr avbl via 25 Operational Wx Squadron at Davis Monthan AFB DSN: 228-6598/6599, C(520)228-6598/6599. Bldgs (and floodlights at night) block the wx forcaster's view of the AER 03. No classified material storage available at AM ops. All classified must be stored in the Nellis AFB command post. For CSTMS and AG, ctc Nellis Support Center for C-130 and larger framed acft at DSN 682-5250 or ctc Base Ops for all other acft at DSN 682-4600 24 hrs prior to arrival.

COMMUNICATIONS: SFA ATIS 270.1 PTD 139.3 372.2 (Unreliable 085°-155° byd 35 NM at FL200, 315°-005° byd 40 NM at FL200. 230°-290° byd 55 NM at FL200.)

- (R) APP CON 118.125 124.95 273.55 291.725
- TOWER 132.55 327.0 GND CON 121.8 275.8
- R DEP CON 135.1 385.4 CLNC DEL 120.9 289.4

ACC COMD POST (RAYMOND 22) 320.0 381.3 (381.3 Have quick timing avbl.)

ALCE AMC 257.35 259.95 (Opr only during Red Flag deployment/change over/redeployment and other exercises.)

PMSV METRO 323.9 (Full service avbl during wx station opr hrs otherwise not avbl. PMSV unreliable 085°–155° byd 35 NM at or below FL200, 315°–005° byd 40 NM at or below FL200, 230°–290° byd 55 NM at or below FL200.)

SUF

(BULLSEYE SOF) 305.6

CONTINUED ON NEXT PAGE

#### CONTINUED FROM PRECEDING PAGE

RADIO AIDS TO NAVIGATION: NOTAM FILE LAS.

LAS VEGAS (H) VORTACW 116.9 LAS Chan 116 N36°04.78′ W115°09.59′ 018° 11.2 NM to fld. 2141/15E. No NOTAM MP Sat 1600–1800Z‡.

(L) TACAN Chan 12 LSV (135.5) N36°14.68′ W115°01.50′ at fld. 1864/15E. NOTAM FILE RNO. No NOTAM MP Wed 0900-11007±.

TACAN unusable:

360°-020° byd 20 NM blo 8,000′ 285°-350° byd 20 NM blo 11,000′ 360°-020° byd 26 NM blo 12,000′ 285°-350° byd 26 NM blo 15,000′

020°-035° byd 30 NM blo 8,000′ 285°-350° byd 33 NM

035°-080° byd 20 NM 50°-360° byd 26 NM 50°-360° byd 20 NM 50°-360° byd

080°-155° byd 15 NM

DME from LSV TACAN.

#### **NORTH FORK**

STEVENS-CROSBY (Ø8U) 3 NW UTC-8(-7DT) N41°30.94′ W115°51.59′

SALT LAKE CITY

6397 NOTAM FILE RNO RWY 01-19: 3600X50 (DIRT)

RWY 19: Fence.

AIRPORT REMARKS: Unattended. Rwy 01–19 has 6 to 8" ruts north 1500' of rwy. First 500' of Rwy 01 rough, uneven and rutted. Rwy 01 terrain drops off 100' end of rwy. Rwy 01–19 has uncontrolled vehicle and livestock access. COMMUNICATIONS: CTAF 122.9

NORTH LAS VEGAS (See LAS VEGAS)

#### OVERTON

ECHO BAY (ØL9) 14 S UTC-8(-7DT) N36°18.67' W114°27.83'

1535 NOTAM FILE RNO

RWY 06-24: H3400X50 (ASPH) S-12.5

RWY 06: Fence. RWY 24: Fence. Rgt tfc.

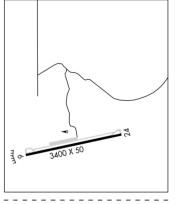
AIRPORT REMARKS: Attended on call. Monitor unicom 122.8 for taxi svc to resort area. Livestock on and in vicinity of arpt. Parallel twy rough and infrequently used.

COMMUNICATIONS: CTAF/UNICOM 122.8

RADIO AIDS TO NAVIGATION: NOTAM FILE RNO.

**BOULDER CITY (H) VORTACW** 116.7 BLD Chan 114 N35°59.75′ W114°51.82′ 031° 27.3 NM to fld. 3650/15E. **HIWAS.** 

LAS VEGAS L-7E



#### CONTINUED FROM PRECEDING PAGE

RADIO AIDS TO NAVIGATION: NOTAM FILE LAS.

LAS VEGAS (H) VORTACW 116.9 LAS Chan 116 N36°04.78′ W115°09.59′ 018° 11.2 NM to fld. 2141/15E. No NOTAM MP Sat 1600–1800Z‡.

(L) TACAN Chan 12 LSV (135.5) N36°14.68′ W115°01.50′ at fld. 1864/15E. NOTAM FILE RNO. No NOTAM MP Wed 0900-11007±.

TACAN unusable:

360°-020° byd 20 NM blo 8,000′ 285°-350° byd 20 NM blo 11,000′ 360°-020° byd 26 NM blo 12,000′ 285°-350° byd 26 NM blo 15,000′

020°-035° byd 30 NM blo 8,000′ 285°-350° byd 33 NM

035°-080° byd 20 NM 50°-360° byd 26 NM 50°-360° byd 20 NM 50°-360° byd

080°-155° byd 15 NM

DME from LSV TACAN.

#### **NORTH FORK**

STEVENS-CROSBY (Ø8U) 3 NW UTC-8(-7DT) N41°30.94′ W115°51.59′

SALT LAKE CITY

6397 NOTAM FILE RNO RWY 01-19: 3600X50 (DIRT)

RWY 19: Fence.

AIRPORT REMARKS: Unattended. Rwy 01–19 has 6 to 8" ruts north 1500' of rwy. First 500' of Rwy 01 rough, uneven and rutted. Rwy 01 terrain drops off 100' end of rwy. Rwy 01–19 has uncontrolled vehicle and livestock access. COMMUNICATIONS: CTAF 122.9

NORTH LAS VEGAS (See LAS VEGAS)

#### OVERTON

ECHO BAY (ØL9) 14 S UTC-8(-7DT) N36°18.67' W114°27.83'

1535 NOTAM FILE RNO

RWY 06-24: H3400X50 (ASPH) S-12.5

RWY 06: Fence. RWY 24: Fence. Rgt tfc.

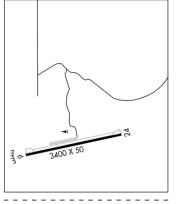
AIRPORT REMARKS: Attended on call. Monitor unicom 122.8 for taxi svc to resort area. Livestock on and in vicinity of arpt. Parallel twy rough and infrequently used.

COMMUNICATIONS: CTAF/UNICOM 122.8

RADIO AIDS TO NAVIGATION: NOTAM FILE RNO.

**BOULDER CITY (H) VORTACW** 116.7 BLD Chan 114 N35°59.75′ W114°51.82′ 031° 27.3 NM to fld. 3650/15E. **HIWAS.** 

LAS VEGAS L-7E



PERKINS FLD (UØ8) 2 N UTC-8(-7DT) N36°34.08' W114°26.60'

1358 B **FUEL** 100 TPA—2158(800) NOTAM FILE RNO

RWY 13-31: H4800X75 (ASPH) S-30 MIRL

RWY 13: Fence. RWY 31: Road. Rgt tfc.

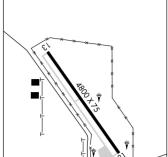
AIRPORT REMARKS: Attended Thu–Mon dalgt hrs. Tues and Wed svc avbl on call 702–397–8457. Ultralight activity on and invof arpt.

ACTIVATE MIRL Rwy 13-31—CTAF.

COMMUNICATIONS: CTAF/UNICOM 122.8

RADIO AIDS TO NAVIGATION: NOTAM FILE RNO.

MORMON MESA (L) VORTAC 114.3 MMM Chan 90 N36°46.16′ W114°16.65′ 198° 14.5 NM to fld. 2120/16E. HIWAS.



**OWYHEE** (1ØU) 4 W UTC-8(-7DT) N41°57.19′ W116°11.26′

SALT LAKE CITY

LAS VEGAS

L-7E

5374 NOTAM FILE RNO

RWY 02-20: 6700X60 (ASPH-GRVL)

AIRPORT REMARKS: Unattended. Livestock on and invof arpt. Be alert to acft parked on thild of Rwy 02–20. Rwy 02–20 weeds to +5' both sides of rwy. Rwy 02–20 rough. Rwy 02–20 unrestricted motor vehicle access on rwy. Rwy 02–20 snow and ice on rwy during winter months.

COMMUNICATIONS: CTAF 122.9

#### **PANACA**

LINCOLN CO (1L1) 2 W UTC-8(-7DT) N37°47.25′ W114°25.30′

LAS VEGAS

4828 B TPA—5628(800) NOTAM FILE RNO RWY 17-35: H4620X60 (ASPH) S-12.5 MIRL

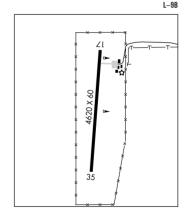
RWY 17: Hill.

AIRPORT REMARKS: Attended continuously. ACTIVATE MIRL Rwy 17–35—122.8.

COMMUNICATIONS: CTAF/UNICOM 122.8

RADIO AIDS TO NAVIGATION: NOTAM FILE RNO.

WILSON CREEK (H) VORTAC 116.3 ILC Chan 110 N38°15.01′ W114°23.66′ 167° 27.8 NM to fld. 9318/16E.



PARKER CARSON (See CARSON CITY)

PERKINS FLD (See OVERTON)

#### RENO

RENO/STEAD (RTS) 10 NW UTC-8(-7DT) N39°40.09′ W119°52.59′ 5050 B S4 FUEL 100LL, JET A OX 1, 3 TPA—See Remarks NOTAM FILE RNO

SAN FRANCISCO H-3B, L-9A, 11A ΙΔΡ

RWY 14: REIL. PAPI(P4L)-GA 3.0° TCH 40'.

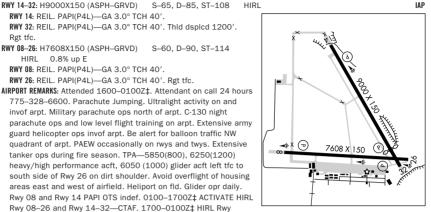
RWY 32: REIL. PAPI(P4L)—GA 3.0° TCH 40'. Thid dsplcd 1200'. Rgt tfc.

RWY 08-26: H7608X150 (ASPH-GRVD) S-60, D-90, ST-114 HIRL 0.8% up E

RWY 08: REIL. PAPI(P4L)-GA 3.0° TCH 40'.

RWY 26: REIL. PAPI(P4L)-GA 3.0° TCH 40'. Rgt tfc.

AIRPORT REMARKS: Attended 1600-0100Z‡. Attendant on call 24 hours 775-328-6600. Parachute Jumping. Ultralight activity on and invof arpt. Military parachute ops north of arpt. C-130 night parachute ops and low level flight training on arpt. Extensive army guard helicopter ops invof arpt. Be alert for balloon traffic NW quadrant of arpt. PAEW occasionally on rwys and twys. Extensive tanker ops during fire season, TPA-5850(800), 6250(1200) heavy/high performance acft, 6050 (1000) glider acft left tfc to south side of Rwy 26 on dirt shoulder. Avoid overflight of housing areas east and west of airfield. Heliport on fld. Glider opr daily. Rwy 08 and Rwy 14 PAPI OTS indef. 0100-1700Z‡ ACTIVATE HIRL Rwy 08-26 and Rwy 14-32-CTAF. 1700-0100Z‡ HIRL Rwy 08-26 and Rwy 14-32 opr continuously.



WEATHER DATA SOURCES: AWOS-A 135.175 (775) 677-0589. Plus visibility.

COMMUNICATIONS: CTAF/UNICOM 122.7

R RENO APP/DEP CON 126.3

RADIO AIDS TO NAVIGATION: NOTAM FILE RNO.

MUSTANG (H) VORTACW 117.9 FMG Chan 126 N39°31.88′ W119°39.37′ 293° 13.1 NM to fld. 5949/16E. ILS/DME 111.9 I-RTS Chan 56 Rwy 32. Class I.

SW, 17 DEC 2009 to 11 FEB 2010

NFVANA 257

**RENO/TAHOE INTL** (RNO) 3 SE UTC-8(-7DT) N39°29.95′ W119°46.09′

CAN FRANCISCO

4415 B S4 FUEL 100LL, JET A1 + OX 1, 2, 3, 4 TPA—See Remarks LRA Class I, ARFF Index C NOTAM FILE RNO H-3B I-9A IAP. AD

RWY 16R-34L: H11002X150 (CONC-GRVD) S-75, D-185, ST-175,

DT-350, DDT-850 PCN 88 R/B/W/T HIRL CL

RWY 16R: MALSR. PAPI(P4L)-GA 3.1° TCH 105'. Thid dspicd 999'. RWY 34L: PAPI(P4L)—GA 3.0° TCH 75'. Thid dspicd 990'. Ground.

RWY 16L-34R: H9000X150 (CONC-GRVD) S-75, D-209, ST-175,

DT-407, DDT-850 PCN 88 R/B/W/T HIRL CL

RWY 16L: REIL. PAPI (P4L)-GA 3.0° TCH 75'.

RWY 34R: REIL. PAPI(P4L)-GA 3.0° TCH 75'.

RWY 07-25: H6102X150 (CONC-GRVD) S-60, D-170, ST-175.

DT-260 PCN 72 R/B/W/T MIRL

RWY 07: REIL. PAPI(P4L)-GA 3.2° TCH 48'. Pole.

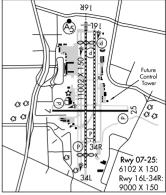
RWY 25: REIL, PAPI(P4L)—GA 3.0° TCH 45', Tree.

#### RUNWAY DECLARED DISTANCE INFORMATION

RWY 07: TORA-5854 TODA-5854 ASDA-6302 LDA-5854

RWY 25: TORA-6102 TODA-6102 ASDA-6302 LDA-6102 AIRPORT REMARKS: Attended continuously. CAUTION: Intensive glider

activity invof arpt and surrounding areas up to 18.000'. Waterfowl all quadrants all seasons. Concentrated NW of Rwv 16R and E of Rwy 16L. Rwy 25 PAPI not to be used byd 2 NM due to rapidly



rising mountainous terrain. Rwy 34L and Rwy 34R PAPI not to be used beyond 6 NM due to high terrain. Construction 1/4 mile east midpoint Rwv 16L, structure 193' AGL, Twv A between N Twv B and Twv D closed to acft with wingspan greater than 149'. Twy C between Twy L and Twy D clsd to air carrier acft. Twy C between Twy L and Twy D restricted to acft 60,000 pounds or less, TPA—5215(800) single engine, 5415(1000) larger/high performance acft. Noise sensitive area all quadrants. All commercial acft ctc ground control for advisories prior to push back on the terminal ramp. Pilots of turbojet acft use recommended noise abatement procedures, avbl on request. Pilots of non-turboiet acft use best abatement procedures and settings. Avoid as much as feasible flying over populated areas. Pure jet touch and go low apph and practice instrument approaches are prohibited: acft over 12500 lbs require prior written approval for training flights; for further information ctc arpt ops 1-877-736-6359. 24 hours PPR for transient acft parking with wingspans greater than 75'. LRA PPR call 775-784-5585, no after hours ldg without prior arrangement. Glider/soaring ops 30-50 miles S of arpt during visual flight rule weather and mountain wave wind conditions 1900Z‡ to SS. For MIRL Rwy 07-25 0600-1330Z±. HIRL Rwv 16L-34R and centerline lgts 0800-1330Z± ctc twr. Touchdown rwv visual range and rwy visibility value Rwy 16R. Flight Notification Service (ADCUS) avbl. NOTE: See Special Notices—Glider/Soaring Activities around the Reno-Tahoe Intl Arpt, Continuous Power Facilities.

WEATHER DATA SOURCES: ASOS (775) 324-6659.

COMMUNICATIONS: D-ATIS 135.8 (775) 348-1550 UNICOM 122.95

RENO RCO 122.2 122.5 (RENO RADIO)

- R RENO APP CON 126.3 (FMG 220°-035°) Rwy 16 119.2 (FMG 036°-255°) Rwy 34
- R RENO DEP CON 126.3 (FMG 256°-035°) Rwy 34 119.2 (FMG 036°-219°) Rwy 16 RENO TOWER 118 7 GND CON 121 9 **CINC DFI** 124 9

AIRSPACE: CLASS C svc continuous ctc APP CON

RADIO AIDS TO NAVIGATION: NOTAM FILE RNO.

MUSTANG (H) VORTACW 117.9 FMG Chan 126 N39°31.88′ W119°39.37′ 234° 5.5 NM to fld. 5949/16E. ILS/DME 109.9 I-AGY Chan 36 Rwy 34L. Class IE. LOC front course unusable inside DUYEP (3.6 NM) above 8,500' MSL at thid abv 6,400' MSL.

ILS/DME 110.9 I-RNO Chan 46 Rwy 16R. Class ID. LOC backcourse unusable byd 20° left of course.

#### \_\_\_\_\_

**SPANISH SPRINGS** (N86) 7 N UTC-8(-7DT) N39°39.99′ W119°43.39′

SAN FRANCISCO

4600 FUEL 100LL NOTAM FILE RNO

RWY 16-34: 3540X71 (DIRT) RWY LGTS(NSTD)

RWY 16: Building. RWY 34: Rgt tfc.

AIRPORT REMARKS: Unattended. Rwy 16-34 hazardous when wet. Ultralight activity on and invof arpt. No line of site between ends of rwy. Mountains West and North. Uncontrolled vehicle access across rwys. Rwy 16 gradient 2.5% up first 500'. Rwy 16 thresholds marked with 4 white cement pads flush to the ground. Rwy edge marked with reflectors.

COMMUNICATIONS: CTAF 122.9

ROSASCHI AIR PARK (See SMITH)

SANDY VALIFY

SKY RANCH (3L2) 2 SW UTC-8(-7DT) N35°47.72′ W115°37.63′

2599 FUEL 100LL NOTAM FILE RNO

IAS VEGAS I-7D

RWY 03-21: H3340X45 (ASPH) RWY LGTS (NSTD)

RWY 21: Thid dspicd 180'. Road. RWY 03: Rgt tfc.

RWY 12-30: 3300X105 (DIRT) RWY 12. Ret tfc

AIRPORT REMARKS: Attended irregularly. Low flying military acft in area. Ultralight activity on and invof arpt. Occasional livestock on and in vicinity of acft movement areas. Rwy 03-21 obstacle free area limited to 96' either side of centerline, Rwv 12 first 1000' soft sand spots, Power poles, lines northwest, southeast of taxiway, Power poles/lines NW/SE of Rwy 03-21. No line of sight between rwy ends. Arpt is a residential airpark, auto traffic is on and across rwy. Avoid noise sensitive residential area 1.5 miles NW of arpt. Rwy 21 dsplcd thld marked with 8' white lines, Rwv 03-21 thid lgts only, Rwv edges marked with reflectors, Rwv 12-30 thid not marked.

COMMUNICATIONS: CTAF/UNICOM 123 O

RADIO AIDS TO NAVIGATION: NOTAM FILE LAS

LAS VEGAS (H) VORTACW 116.9 LAS Chan 116 N36°04.78' W115° 09.59' 218° 28.4 NM to fld. 2141/15E.

**SEARCHLIGHT** (1L3) 2 S UTC-8(-7DT) N35°26.67′ W114°54.57′

PHUENIA H-41. L-7E

3410 NOTAM FILE RNO

RWY 16-34: H5040X70 (ASPH) RWY 16. Fence

AIRPORT REMARKS: Unattended. Ground rises at constant rate north of arpt for approximately 2 miles. Unlighted 165' p-line located approximately 3.2 miles south of rwy blo thld. Rwy 16-34 thlds marked with 6 green reflectors.

COMMUNICATIONS: CTAF 122.9

RADIO AIDS TO NAVIGATION: NOTAM FILE RAL.

GOFFS (L) VORTAC 114.4 GFS Chan 91 N35°07 87' W115°10 59' 020° 22 9 NM to fld 4000/15F

**SILVER SPRINGS** (SPZ) 2 SW UTC-8(-7DT) N39°24.18′ W119°15.07′

SAN FRANCISCO H-3B, L-9A

4269 NOTAM FILE RNO

RWY 05-23: H5998X75 (ASPH-GRVD) S-30 MIRI

RWY 23: Rgt tfc. AIRPORT REMARKS: Unattended. Ultralight activity on and invof arpt. ACTIVATE MIRL Rwy 05-23—CTAF.

WEATHER DATA SOURCES: AWOS-3 122.9 (617) 262-3825.

COMMUNICATIONS: CTAF 122 9

RADIO AIDS TO NAVIGATION: NOTAM FILE RNO.

HAZEN (L) VORTAC 114.1 HZN Chan 88 N39°30.99′ W118° 59.86′ 223° 13.6 NM to fld. 4080/17E.

SKY RANCH ESTATES (See SANDY VALLEY)

4809 FUEL 100LL NOTAM FILE RNO

**SMITH** 

ROSASCHI AIR PARK (N59) 2 N UTC-8(-7DT) N38°50.36′ W119°20.29′

SAN FRANCISCO

1\_9A

RWY 07-25: H4800X32 (ASPH)

RWY 17-35: 3700X64 (DIRT)

RWY 35: Building.

AIRPORT REMARKS: Unattended. For fuel 24 hr prior notice required call 775-465-2417. Numerous severe cracks entire length of Rwy 07-25.

**COMMUNICATIONS: CTAF 122.9** 

RADIO AIDS TO NAVIGATION: NOTAM FILE RNO.

HAZEN (L) VORTAC 114.1 HZN Chan 88 N39°30.99' W118°59.86' 184° 43.6 NM to fld. 4080/17E.

**SOD HOUSE** N41°24.42′ W118°02.08′ NOTAM FILE RNO.

KLAMATH FALLS

(L) VORTACW 114.3 SDO Chan 90 143° 32.3 NM to Winnemucca Muni. 4161/18E. I-11R

030°-160° byd 20 NM below 15,000′

220°-245° byd 20 NM below 15,000'

300°-345° byd 20 NM below 13,000'

RC0 122.6 (RENO RADIO)

VORTAC unusable:

SPANISH SPRINGS

(See RENO)

STEVENS-CROSBY (See NORTH FORK)

TIGER FLD (See FERNLEY) NFVANA 259

TONOPAH (TPH) 7 E UTC-8(-7DT) N38°03.61′ W117°05.21′ 5430 B S4 FUEL 100LL, JET A OX 4 NOTAM FILE TPH

RWY 15-33: H7161X80 (ASPH) S-30 MIRL 0.5% up NW

RWY 15: PAPI(P2L)-GA 3.0° TCH 40'. RWY 33: VASI(V4L)-GA 3.0° TCH 31'.

RWY 11-29: H6196X50 (ASPH) S-30, D-66, ST-84, DT-77 0.3% up NW

RWY 11: Thid dspicd 538'.

AIRPORT REMARKS: Attended 1400-0700Z‡. Fuel avbl 1500-0200Z‡ after hours on request call 775-482-3626. Parachute Jumping. Rwy 15 PAPI out of svc indefinitely. ACTIVATE MIRL Rwy 15-33-CTAF, NOTE: See Special Notices-FAR-PART 139 Certificated Airports.

WEATHER DATA SOURCES: ASOS 118.875. (775) 482-3441.

COMMUNICATIONS: CTAF/UNICOM 123.0

RCO 122.6 (RENO RADIO)

R SALT LAKE CENTER APP/DEP CON 133.45

RADIO AIDS TO NAVIGATION: NOTAM FILE TPH.

TPH Chan 119 N38°01.84' (L) VORTACW 117.2 W117°02.01' 288° 3.1 NM to fld. 5344/17E. VORTAC unusable:

360°-015° beyond 30 NM below 10,800'

015°-050° beyond 35 NM below 10,800'

050°-060° beyond 30 NM below 9500° 240°-260° beyond 30 NM below 10,600'

270°-315° beyond 20 NM below 8600°

+60

TRUCKEE-TAHOE (See TRUCKEE-TAHOE, CA)

VAN VOORHIS FLD (See FALLON NAS)

WELLS MUNI/HARRIET FLD (LWL) 2 NE UTC-8(-7DT) N41°07.03' W114°55.33'

SALT LAKE CITY H-3C, L-11C

5772 B FUEL 100LL NOTAM FILE RNO RWY 08-26: H5498X150 (ASPH) S-25 MIRL

RWY 08: Rgt tfc.

RWY 01-19: 2681X150 (GRVL-DIRT)

RWY 01: Rgt tfc. Building. RWY 19: Hill.

AIRPORT REMARKS: Attended Mon-Fri 1600-0100Z‡. After hours call 775-752-3946. Ultralight activity on and invof arpt. Mountains N and S quadrants. Rwy 08-26 center 75' stressed for 25,000 pounds single wheel, remainder of 150' width is 11,500 pounds single wheel. Rwy 01-19 marked with +2 ft red/white panels 75 ft outside shoulder. Rwy 01-19 vegetation +1' full length. Snow removal svcs during dalgt only except by prior arrangement call 775-777-7300. ACTIVATE MIRL Rwy 08-26-122.8.

COMMUNICATIONS: CTAF/UNICOM 122.8

WELLS RCO 122.1R 114.2T (RENO RADIO)

RADIO AIDS TO NAVIGATION: NOTAM FILE EKO.

BULLION (L) VORW/DME 114.5 BQU Chan 92 N40°45.58′ W115°45.68′ 043° 43.8 NM to fld. 6463/17E. (L) VOR 114.2 LWL N41°08.69′ W114°58.65′ 106° 3.0 NM to fld. NOTAM FILE RNO. VOR unusable:

060°-070° beyond 20 NM below 12.000'.

115°-125° beyond 20 NM below 13,000'.

180°-215° beyond 10 NM.

330°-350° beyond 15 NM below 13.000'. 350°-040° beyond 25 NM below 12.000'.

WILSON CREEK N38°15.01′ W114°23.66′ NOTAM FILE RNO.

LAS VEGAS H-3C, L-9B

(H) VORTAC 116.3 ILC Chan 110 167° 27.8 NM to Lincoln Co. 9318/16E.

RCO 122.1R 116.3T (RENO RADIO)

LAS VEGAS H-3C I-9B IAP. AD

 WINNEMUCCA MUNI
 (WMC)
 5 SW
 UTC-8(-7DT)
 N40°53.80′ W117°48.35′

 4308
 B
 S4
 FUEL
 100LL, JET A
 TPA—5108(800)
 NOTAM FILE WMC

**RWY 14–32**: H7000X100 (ASPH) S–75, D–125, ST–159, DT–200 MIRL

**RWY 14:** VASI(V2L)—GA 3.0° TCH 40′. P-line. **RWY 02-20:** H4800X75 (ASPH) S-28 MIRL

RWY 20: Road.

AIRPORT REMARKS: Attended Nov-May 1500-0100Z‡ Jun-Oct

1500–02002‡. After hours on call at 775–304–1350. Mountains in SW quadrant. Full strength pavement areas include N 1000′ of parallel twy (Rwy 14–32 to Twy A), W 1000′ of Twy A, 600′ of N/S twy (from Twy A). MIRL Rwy 14–32 preset low ints, to increase ints ACTIVATE—CTAF.

WEATHER DATA SOURCES: ASOS 120.175 (775) 625-2200.

COMMUNICATIONS: CTAF/UNICOM 122.8

RCO 122.3 (RENO RADIO)

SALT LAKE CENTER APP/DEP CON 132.25

RADIO AIDS TO NAVIGATION: NOTAM FILE WMC.

(T) VORW/DME 108.2 INA Chan 19 N40°53.96′ W117°48.73′ at fld. 4302/16E.

VOR/DME unusable:

ON/ DIVIL UTIUSABIE.

050°-110° beyond 15 NM below 11,300′

110°-130° beyond 20 NM below 10,800'

150°–190° beyond 15 NM below 10,200′

190°-210° beyond 20 NM below 11,800°

HELIPAD H1: H25X25 (CONC) HELIPAD H2: H25X25 (CONC)

YERINGTON MUNI (043) 1 N UTC-8(-7DT) N39°00.25′ W119°09.48′

4378 B S4 **FUEL** 100LL TPA—5178(800) NOTAM FILE RNO

**RWY 01-19**: H5800X75 (ASPH) S-24, D-32 MIRL

RWY 01: PAPI(P2L)—GA 3.0° TCH 40'.

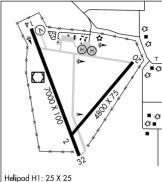
RWY 19: REIL. PAPI(P2L)—GA 3.0° TCH 40 '. Trees.

AIRPORT REMARKS: Attended Mon-Fri 1500-0200Z‡, Sat-Sun irregularly. Rwy 19 REIL OTS indef. ACTIVATE MIRL Rwy 01-19—CTAF.

COMMUNICATIONS: CTAF/UNICOM 122.8

RADIO AIDS TO NAVIGATION: NOTAM FILE RNO.

HAZEN (L) VORTAC 114.1 HZN Chan 88 N39°30.99′ W118°59.86′ 177° 31.6 NM to fld. 4080/17E.



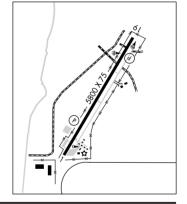
Helipad H2: 25 X 25

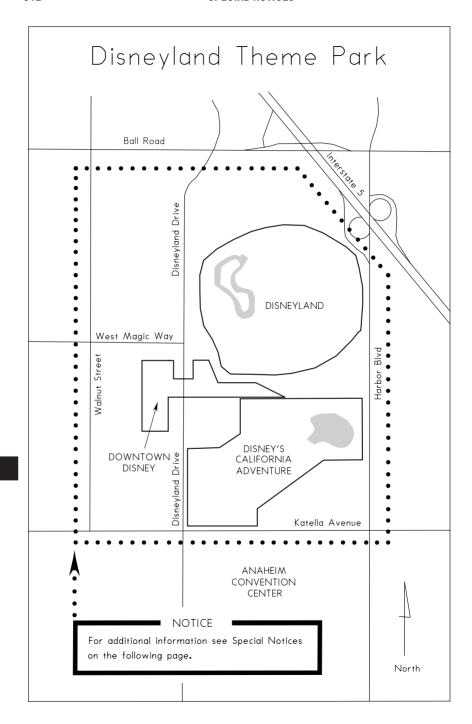
SAN FRANCISCO H-3B, L-9A

KLAMATH FALLS

H-3B, L-11B

ΙΔΡ





## DISNEYLAND THEME PARK NOTICE

Pursuant to Public Law 108–199, Section 521, aircraft flight operations are prohibited at and below 3,000 feet AGL within a 3 nautical mile radius of the Disneyland Theme Park (334805N/1175517W or the Seal Beach (SLI) VORTAC 066 degree radial at 6.8 nautical miles). This restriction does not apply to: (A) those aircraft authorized by ATC for operational or safety purposes, including aircraft arriving or departing from an airport using standard air traffic procedures; (B) Department of Defense, law enforcement, or aeromedical flight operations that are in contact with ATC; Those who meet any of the following criteria may apply for a waiver to these restrictions: (A) for operational purposes of the venue, including the transportation of equipment or officials of the governing body; (b) for safety and security purposes of the venue.

## LIGHTS-OUT OPERATIONS Desert/Reveille MOAs, Nevada and Utah

Lights—out night vision goggle flight training operations conducted within the Desert and Reveille North/South Military Operations Areas (MOAs) at all altitudes, Monday through Friday between sunset and sunrise when the MOAs are active. Traffic advisories are available from the Nellis ATC Facility (Nellis Control) on 126.65 or 124.95.

## LIGHTS-OUT OPERATIONS Lucin/Seveir/Gandy MOAs, Utah

Lights—out night vision goggle flight training operations conducted within the Lucin, Seveir, and Gandy Military Operations Areas (MOAs) at all altitudes, Monday through Friday between sunset and sunrise when the MOAs are active. Traffic advisories are available from the Clover ATC Facility (Clover Control) on 118.45 or 134.1.

#### INTERSECTION DEPARTURES DURING PERIOD OF DARKNESS SAN FRANCISCO INTERNATIONAL AIRPORT (SFO) SAN FRANCISCO, CALIFORNIA

San Francisco International Airport Traffic Control Tower has been granted a waiver to the guideline that prohibits the control tower from taxiing an aircraft into "position and hold" at an intersection, between sunset and sunrise.

This waiver allows the tower to taxi the aircraft into "position and hold" during period of darkness, at the intersections listed below.

Runway 1R at Taxiway Mike Runway 10L at Taxiways Romeo or Uniform Runway 10R at Taxiway Uniform

Aircraft shall not taxi into position and hold under the provisions of this waiver when the subject intersection is not visible from the tower. When the provisions of this waiver are being exercised, the affected runways shall be used for departures only. Intersection departures will continue to be utilized at other locations between sunset and sunrise. However, aircraft cannot be taxied into "position and hold" prior to takeoff clearance.

#### INTERSECTION DEPARTURES DURING PERIOD OF DARKNESS LAS VEGAS-MCCARRAN INTERNATIONAL AIRPORT (LAS) LAS VEGAS. NEVADA

Las Vegas-McCarran International Airport Traffic Control Tower has been granted a waiver to the guideline that prohibits the control tower from taxiing an aircraft into "position and hold" at an intersection, between sunset and sunrise.

This waiver allows the tower to taxi the aircraft into "position and hold" during period of darkness, at the intersections listed below.

#### Runway 07L at Taxiways "A8" or Delta

Aircraft shall not taxi into position and hold under the provisions of this waiver when the subject intersection is not visible from the tower. When the provisions of this waiver are being exercised, the affected runway shall be used for departures only. Intersection departures will continue to be utilized at other locations between sunset and sunrise. However, aircraft cannot be taxied into "position and hold" prior to takeoff clearance.

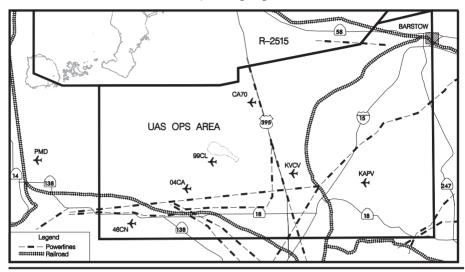
## LOS ANGELES, CA, LOS ANGELES INTERNATIONAL AIRPORT (LAX) NOISE ABATEMENT PROCEDURES

Successive or simultaneous departures from Runways 24L/R and Runways 25L/R are authorized, with course divergence beginning within 2 miles from the departure end of parallel runways, due to noise abatement restrictions.

#### **UNMANNED AIRCRAFT SYSTEMS (UAS) OPERATIONS IN SOUTHERN CALIFORNIA**

UAS operations are conducted sunrise to sunset within three (3) nautical miles of El Mirage Field Adelanto (N34°37′30″, W117°36′20″) and Grey Butte (N34°33′55″, W117°40′50″) at or below 6,000 feet MSL. From sunset to sunrise operations may be conducted within four (4) nautical miles at and below 4,000 feet AGL. Contact Joshua control on 124.55 or 363.0 for activity information and advisory service.

UAS operations may be conducted in accordance with Visual Flight Rules (VFR) accompanied by a chase aircraft below 14,000 feet MSL in an area bounded by  $N34^{\circ}58'00''$  W117 $^{\circ}00'00''$ ,  $N34^{\circ}27'00''$  W117 $^{\circ}00'00''$ ,  $N34^{\circ}27'00''$  W117 $^{\circ}55'00''$ ,  $N34^{\circ}48'00''$  W117 $^{\circ}35'03''$ ,  $N34^{\circ}48'30''$  W117 $^{\circ}32'03''$ ,  $N34^{\circ}50'20''$  W117 $^{\circ}32'03''$ ,  $N34^{\circ}50'20''$ 



#### **UNMANNED AIRCRAFT SYSTEMS (UAS) OPERATIONS IN NORTHERN NEVADA**

UAS operations are continuously conducted within the Fallon Approach Control Airspace and the Fallon Range Training Complex at all altitudes when the Special Use Airspace areas are active. Contact Desert Control on 126.2 MHz. for activity status.

#### **UNMANNED AIRCRAFT SYSTEMS (UAS) OPERATIONS IN NEVADA AND UTAH**

There is continuously unmanned aircraft systems flight activity conducted within the desert and reveille military operations areas (MOAs) at all altitudes when the MOAs are active. Traffic advisories are available from the Nellis Air Traffic Control facility (Neillis Control) on 126.65.

#### MODEL AIRCRAFT ACTIVITY—EL TORO, CALIFORNIA

Model aircraft activity conducted 500' AGL and below, 0.5 NM radius of apch end of Rwy 25L. CLOSED MCAS El Toro, daily 1500–0400Z‡. For NOTAM information contact Prescott AFSS on 800–992–7433.

## DENVER TERMINAL RADAR APPROACH CONTROL Denver, Colorado

The Denver Terminal Radar Approach Control has been issued a waiver which enables controllers to assign speed restrictions without obtaining pilot concurrences; e.g., speeds of less than 250 knots below FL280 and speeds of less than 210 knots when the aircraft is greater than 20 flying miles from the threshold of the airport of intended landing.

## EXTENSIVE HELICOPTER FLIGHT TRAINING IN THE VICINITY OF ROCKY MOUNTAIN METROPOLITAN AIRPORT (BJC), BROOMFIELD, COLORADO

Frequent usage of Runway 11R-29L, Taxiway D, and the north end of Runway 20 by helicopter flight schools. Pilots are cautioned to listen carefully to ATC for turnoff instructions when landing on Runway 11R-29L. Helicopters flight schools use three primary local procedures: Charlie Two, Ball, and Erie. CHARLIE TWO; Expect departures to the south thence turning to the northwest. Expect arrivals from the northwest. BALL; Expect departures to the south thence turning east. Expect arrivals from the east. ERIE; Expect departures northbound. Expect arrivals from the north.

#### INTENSE HELICOPTER OPERATIONS LOS ANGELES BASIN AREA, CALIFORNIA

CAUTION: Intense helicopter operation below 2000'AGL. All pilots transitioning the area at or below 2000'AGL are encouraged to make regular position reports on frequency 123.025.

## LASER LIGHT DEMONSTRATIONS Anaheim, California

A laser light demonstration will be conducted nightly between sundown and midnight at Disneyland, Anaheim, California (SLI VORTAC 060 radial at 7NM LAT 33°48′40′M/LON 117°55′100′M). The beam may be injurious to eyes if viewed within 300 feet vertically and 600 feet laterally of the light sources. Cockpit illumination–flash blindness may occur beyond these distances.

#### Knotts Berry Farm Buena Park, California

A permanent laser light demonstration is being conducted at Knotts Berry Farm, 33°49′45″N/117°59′35″W, Seal Beach Vortac SLI 022/005, 0445 to 0600 UTC DLY. Laser light beam may be injurious to pilots/passengers eyes within 800 feet vertically and 1400 feet laterally of the light source. Flash blindness or cockpit illumination may occur beyond these distances.

#### Long Beach, California

A laser light demonstration will be conducted nightly between sundown and 11 PM at the Pine Avenue Theater Complex, Pine Avenue, Long Beach, California (SLI VORTAC 250 radial at 8NM LAT 33°46′12″N/LON 118°11′30″W). The beam may be injurious to eyes if viewed within 100 feet vertically and 1,900 feet laterally of the light source. Cockpit illumination–flash blindness may occur beyond these distances.

#### **Palomar Observatory**

A laser light operation is conducted intermittently between sunset and sunrise at the Palomar Observatory N33–21–22/W 116–51–53, Julian VOR (JLI) 298 degree radial at 19 nautical miles. The laser beam may be injurious to eyes if viewed on axis. Cockpit illumination and flash blindness may also occur if the beam enters the cockpit. Los Angeles ARTCC, (661) 265–8205 is the FAA coordination facility.

#### San Francisco, California

A Laser Light Demonstration will be conducted nightly between 8:30 pm and 2:00 am at Pier 39, San Francisco, California (SAU VORTAC 100 radial at 12 NM LAT 37°48′40″ N; LON 122°24′35″ W). The beam may be injurious to Pilots/Passengers' eyes if viewed within 800 feet vertically and 800 feet laterally of the light source. Cockpit illumination-flash blindness may occur beyond these distances.

#### CHRISTMAN AIRPORT, FORT COLLINS, COLORADO

A laser light operation for testing and alignment is being conducted at Christman Airport, 40°35′24″N/105°08′26″W, GLL VORTAC 270/28MM. This testing is ongoing, intermittently, 24 hours per day 7 days a week. Laser light beams may be injurious to pilot's/passenger's eyes within 4479 feet of the light source, to 8958 feet AGL. The secondary effects of flash blindness or cockpit illumination may occur beyond these distances. Denver TRACON, 303–342–1590 is the FAA coordination facility.

#### CONTROLLED FIRING AREA (CFA) EAST OF YUMA, AZ

The military has established a controlled firing area (CFA) east of Yuma, AZ. The CFA is bordered by the following fixes: BZA058015 - BZA068035 - BZA072034 - BZA075030 - BZA075015 - BZA058015. Operations will be conducted at or below 3000'AGL. The hours of operation are Monday through Saturday from sunrise to sunset.

#### SAN DIEGO, CALIFORNIA SOUTHBOUND INTERNATIONAL BORDER CROSSING

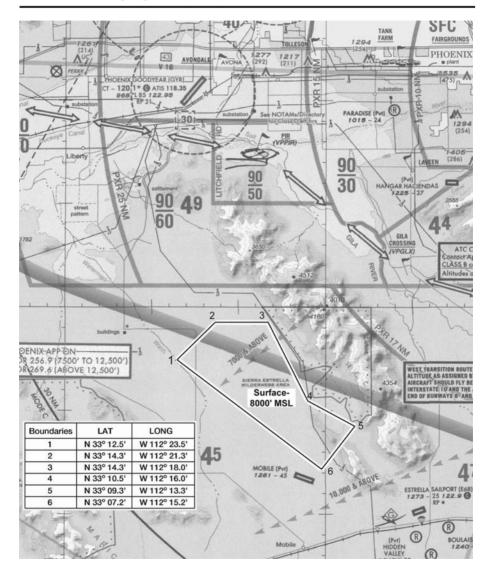
Pilots crossing the International border southbound into Mexican airspace, in the vicinity of San Diego, are encouraged to cross Tijuana International Airport at midfield to avoid arriving and departing aircraft. Pilots requesting transition through the Brown Field CLASS D airspace should contact Brown Tower on frequency 126.5. All others should contact Tijuana Approach Control on frequency 119.5 prior to crossing the border. Southbound aircraft are requested to squawk 1260 prior to crossing the border unless otherwise advised by ATC.

## EXTENSIVE PARACHUTE DROP ACTIVITIES SAN DIEGO. CALIFORNIA

Use caution when transiting the corridor south of San Diego Class B airspace and north of the international border between the coast and east to the Tecate area. A wide variety of civilian and military aircraft types (Cessna 182–C–130) use this corridor to make high rates of ascent and descent from the surface to 15000 MSL. Note the San Diego, Trident, and Otay Reservoir jumping areas located in this corridor and to the northeast of Brown Field Municipal Airport. Use VHF 121.95 to monitor parachute drop activities.

## AEROBATIC OPERATIONS SOUTHEAST OF PHOENIX GOODYEAR AIRPORT, GOODYEAR, ARIZONA

The aerobatic training area center point is located on the Stanfield VOR 300° radial at 26.5 DME. The area exists approximately 2 nautical miles on each side of the TFD VOR 300° radial from 22 to 31 DME, surface to 8000′ MSL. Pilots should use caution in this area. Frequency 128.92 is provided for air-to-air communications with pilots using or transiting the area. For information regarding hours of operation, contact 623–932–1650.



## AEROBATIC PRACTICE AREA MOUNTAIN VALLEY AIRPORT, TEHACHAPI, CALIFORNIA

Practice and competitive aerobatic maneuvers regularly scheduled adjacent to south side of Mountain Valley Airport (3 NM long X ½ NM wide), surface to 5000' AGL. The practice area is for waiver holders only. Pilots should use caution when operating within this area. For further information contact VAN NUYS FSDO on 1–818–904–6291.

#### Restricted Area R-2305 Gila Bend, Arizona Transit Information

A transit route extends from Gila Bend to the Eric Marcus Airport over Arizona Highway 85 at 500 feet above ground level (AGL). VFR rules govern civilian flight through the Goldwater Air Force Range. Airevac flights will be given priority over all other air traffic other than inflight emergencies. The Airevac call sign will be used only when the aircraft is on an actual air evacuation mission. Department of Public Safety (DPS) "Ranger" call signs must indicate they are on an Airevac mission to receive priority. Military aircraft will have priority over all remaining aircraft. Aircraft requesting to transition this airspace may encounter delays.

General aviation aircraft must coordinate their route of flight, departure, and return times with Range Operations prior to departure. Phone (623) 856–8818/8819. Once airborne, aircraft from the north contact Gila Bend AFAF Tower (primary) on 257.65/127.75 (UHF/VHF) or Range Operations (secondary) on 264.125/122.775. Aircraft from the south contact Range Operations 264.125/122.775. Aircraft must hold outside restricted airspace until clearance is granted to transit the area. After receiving clearance into the Restricted Airspace, pilots shall monitor Range Operations frequency.

The preferred VFR procedure will be to fly over Highway 85 at 500 feet AGL, monitoring Range Ops on VHF 122.775. At night aircraft will fly over Highway 85 at or below 1000 feet AGL. Military aircraft on manned ranges will be instructed to remain clear of Highway 85 or to transit the highway 500 feet above altitude of transiting aircraft.

Caution: Due to repeater transmissions and mountainous terrain, flights north of the Sauceda Mountains (Black Gap) will normally only be able to contact Gila Bend Tower. Flights south of the mountains should contact Range Operations. Military aircraft on the Range may be operating lights out.

The normal hours of the Goldwater Air Force Range are from 0630–2400 local Monday through Saturday. When the range is not active, Gila Bend AFAF Tower and Range Operations are closed. If unable to contact the Tower or Range Operations, contact Albuquerque ARTCC on 126.45 or 125.25 for clearance.

#### LOW ALTITUDE TACTICAL NAVIGATION AREA (LATN) EAST OF TUCSON, AZ

The military has established a Low Altitude Tactical Navigation Area (LATN) east of Tucson bordered by the following fixes: TUS037017-TUS025022-TUS038037-CIE323030-CIE294015-CIE255022-TUS090028-TUS055029-TUS037017. The LATN is not a restricted area and will continue to be available for use by civilian aircraft in accordance with FAA rules and regulations. The primary operations will be conducted by HH-3/MH-60 helicopters from 100 ft AGL to 600 ft AGL. The hours of operations will be daily from 1500-0100Z

## SEA WORLD TETHERED BALLOON SAN DIEGO, CALIFORNIA

(Until Further Notice)

Tethered balloon 367 MSL DLY 1700-0400, Located on the Mission Bay VORTAC 180 radial at 1 mile (MZB180001).

## UNAUTHORIZED TRANSMISSION ARIZONA. CALIFORNIA. AND NEVADA AREA

(Until Further Notice)

Attention all aircraft: Be alert to the possibility of UNAUTHORIZED AIR TRAFFIC CLEARANCES issued on ATC frequencies in the Arizona, California, and Nevada areas. If you received a transmission that is questionable verify with AIR TRAFFIC CONTROL.

## SAN FRANCISCO INTERNATIONAL AIRPORT EXPANDED CHARTED VISUAL FLIGHT PROCEDURES

(Until Further Notice)

\*\*\*GFNFRAI \*\*\*

San Francisco International Airport (SFO) is subject to stratus moving slowly from West to East, creating a reportable weather ceiling over the airport, while the final approach area for Runways 28R and 28L have no significant ceiling or visibility conditions. And expanded charted visual flight procedure (E/CVFP) has been developed to maximize the level of airport efficiency during the unusual weather conditions described above.

#### \*\*\*MINIMUMS\*\*\*

The E/CVFP incorporates the following weather minimums:

SFO ceiling 2100 feet and visibility 5 miles; or,

SFO ceiling 1000 feet and visibility 3 miles, and,

visibility 5 miles in the Eastern quadrant (030-120), and,

ceiling 2400 and visibility 5 miles at the automated weather observing system (AWOS) located at BRIJJ

LOM. In the event the AWOS is inoperative, weather at San Carlos (SQL) is required to be at least ceiling 2400 feet and visibility 5 miles.

Although the listed weather minima are in effect aircraft should not expect simultaneous E/CVFP approaches unless BRIJJ AWOS ceiling is at least 3500 feet and visibility is at least 5 miles.

#### \*\*\*SPACING AND SEQUENCING\*\*\*

Controllers will clear aircraft for the E/CVFP in accordance with the provisions of Order 7110.65, Air Traffic Control. They will not utilize phrases requesting or requiring aircraft to "fly right alongside", "wingtip to wingtip", or "directly abeam" other aircraft. Additionally, controllers will not assign instructions or require aircraft to pass and/or overtake other aircraft on the adjacent final approach course. Preferably, aircraft will be vectored to achieve a slightly staggered position of approximately ½ to ¼ mile behind the aircraft on the adjacent final approach course. Heavy aircraft and B757's will not be authorized to overtake another aircraft on the adjacent final approach course. Wake turbulence cautionary advisories will be issued, as appropriate.

#### \*\*\*GO-AROUND PROCEDURE\*\*\*

The Tipp Toe and Quiet Bridge approaches are visual approaches, and as such have no missed approach segment. If a go-around is necessary, aircraft will be issued an appropriate advisory/clearance/instruction by the tower or tracon. To ensure standard separation from other traffic, these instructions will include the assignment of a specific heading and altitude, Normally, the following procedures will apply:

#### Tipp Toe Visual Runway 28L

In the event of a go-around turn left heading 265, climb and maintain 3000; or as directed by Air Traffic Control.

#### Quiet Bridge Visual Runway 28R

In the event of a go-around turn right heading 310, climb and maintain 3000; or as directed by Air Traffic Control.

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#### **AEROBATIC OPERATIONS IN ARIZONA**

The following practice and competitive aerobatic areas are in use without notice SR-SS daily.

5 NMR DMA	17,500 and below
2 NMR INW195055/PAN	9,600 and below
1 NM N-S and 7 NM E-W of the PXR017022	6,500 and below
PXR019020	7,500 and below
PXR128013	5,500 and below
1 Square mile of the PXR194023	5,000 and below
1 NMR PXR129018	5,000 and below
1 NMR PXR316026.2	6,600 and below
3 NMR PXR 323024	6,000 and below
2 NM N-S and 4 NM E-W PXR325027	8,000 and below
1 NM Square TFD 3000 18/E60	6,300 and below
1 NMR TFD065025/PØ8	5,500 and below
1 NMR TFD143021	3,000 and below
4 NMR TFD010020	4,800 and below
1NMR TFD107036	5,000 and below
PØ8-COOLIDGE	10,000 and below
12 NW of DVT	6,500 and below
5 NMR DRK215013	11,500 and below

Pilots should use caution in these areas. For further information contact Prescott AFSS on 1-800-992-7433.

#### AEROBATIC OPERATIONS NORTHWEST OF TUCSON, AZ.

Practice and competitive aerobatic maneuvers are regularly scheduled on the Tucson VORTAC 295 radial at 25 miles and Tucson VORTAC 308 radial at 22 miles, sunrise to sunset, up to 5,000 MSL.

#### AEROBATIC OPERATIONS NORTHEAST OF REDLANDS. CA

Practice and competitive aerobatic maneuvers are regularly scheduled in the vicinity of the PDZ VORTAC 045 radial at 23 nautical miles from 1,500' AGL up to and including 7,500' MSL. The practice area is for waiver holders only. Pilots should use caution in this area. Frequency 123.3 is provided for air-to-air communications with other pilots using or transiting the area.

#### AEROBATIC OPERATIONS NORTHEAST OF SANTA PAULA. CA

Practice and competitive aerobatic maneuvers are regularly scheduled in the vicinity of FIM VORTAC, SR-SS, 1,500′ AGL to 5,500′ MSL. The Aerobatic Area is defined by FIM 220/004, to FIM 260/008, to FIM 285/009, to FIM 360/005, to FIM 055/014, to FIM 070/013. The practice area is for waiver holders only. Pilots should use caution in this area. Frequency 122.775 is provided to air-to-air communications with other pilots using or transiting the area.

#### **AEROBATIC OPERATIONS IN COLORADO**

Practice and competitive aerobatic maneuvers are regularly conducted during daylight hours at the following locations:

- a. 2 NM radius GLL 180/009, 10000 MSL and below.
- b. 1 NM radius Sterling Muni (STK), 4000 AGL and below.
- c. 1 kilometer square, 800 to 3000 AGL 3 statute miles east of RWY 17-35, Kelly Airpark (CO15).
- d. 1 statute mile square, surface to 4000 AGL. Center of the area is located 2850 feet east of RWY 18–36. Western boundary is 1000 feet from RWY 18–36 and northern boundary is 100 feet from RWY 08–26, Lamar Airport (LAA). The (LAA) ASOS will broadcast aerobatic area information when this area is active. For further information, contact Flight Services 1–800–WX-BRIEF.
- e.1 kilometer square, 5000 AGL .5 statute mile east of Ft. Morgan Muni (FMM).
- f.1 NM radius GLL 315/006, 10000 MSL and below. 6.2 statue miles northwest of Vance Brand (LMO) Mon-Sat  $\parallel$  1500-2359, Sun 1600-2359.

#### AEROBATIC PRACTICE AREA JEAN AIRPORT, JEAN, NEVADA

Aerobatic flight activity will be conducted within a 3300' square box, located 2 miles west of Jean Airport (Specific area of operation is ½ mile radius from a point described by the LAS 190/20). Flights will occur from SFC to 6500 MSL, between 1 hour after sunrise to 1 hour before sunset daily. Pilots should use caution when operating within this area. To obtain a copy of the Certificate of Waiver outlining appropriate procedures for utilization of the practice area, ctc Henderson Executive Airport at (702) 261–4800.

## AEROBATIC PRACTICE AREA VAUGHN MUNICIPAL AIRPORT (N17), VAUGHN, NEW MEXICO

Aerobatic practice will be conducted within a 3 NM radius of the Vaughn Municipal Airport (N17), SFC to 11,000 feet MSL, SR-SS. For further information contact Flight Services at 1–800–WX–BRIEF (992)–7433).

## EXTENSIVE FLIGHT TRAINING IN VICINITY OF ERNEST A. LOVE FIELD, PRESCOTT, ARIZONA

Extensive flight training activity in areas 5 to 38 miles from the Prescott Airport 14,000 MSL and below. These areas are in use from sunrise to sunset daily. Participating traffic reports on 123.5.

## EXTENSIVE FLIGHT TRAINING IN VICINITY OF ANGWIN-PARRETT FIELD (203), ANGWIN, CALIFORNIA

Extensive flight training activity within a 10 NM radius of STS056024 (MAUCH INT), 4,500 MSL and below. This area is in use from 1400–0300 UTC daily. Participating traffic reports on 123.0.

## EXTENSIVE FLIGHT TRAINING IN VICINITY OF PROVO MUNICIPAL AIRPORT

Extensive flight training activity in areas 5 to 30 miles S & W of Provo Municipal Airport from the PVU260R-PVU150R, 9,000 MSL and below. These areas are in use from 1100Z to 0400Z Monday thru Saturday; participating traffic contact Eagle Base on 123.5.

#### UNMANNED AIRCRAFT SYSTEMS. SOUTHEASTERN. AZ

Unmanned aircraft system activity along the international border in southeastern Arizona. Pilots flying near the international border between Nogales, Arizona and the New Mexico border should be alert for unmanned aircraft systems operating from 14,000′ MSL to 16,000′ MSL inclusive, 0000–1500 UTC daily.

#### **ROCKET FIRING SOUTHEAST OF RENO, NEVADA**

Rocket firing occurs approximately on the Mustang VORTAC 107 radial at 7 miles, normally seven days a week, sunrise to sunset, up to but not including 1,000 ft above ground level.

#### **GLIDER OPERATIONS NORTHWEST OF TUCSON, ARIZONA**

There is regularly scheduled glider/soaring activity conducted from El Tiro Airport, which is located approximately on the Tucson VORTAC (116.0 MHz) 297° radial at 31 nautical miles: this is south of Pinal (Marana) Airpark and bordered by V16, V66, and V105. Activity at El Tiro is normally scheduled for Saturday, Sunday, and Wednesday, with much of the soaring conducted near the intersection of V66 and V105 at altitudes up to, but not including flight level 180.

#### CAUTION-TETHERED AEROSTAT RADAR SYSTEM (TARS)

A TARS (a large helium-filled balloon) operates continuously up to 15,000 feet, except during inclement weather or when the system is down for maintenance, in R–2312 near Fort Huachuca, Arizona. The tether is unmarked and is virtually impossible to see from only a few hundred feet. See the Phoenix Sectional Chart for location.

#### YOSEMITE NATIONAL PARK

Public law prohibits flight of VFR helicopters or fixed-wing acft below 2000 feet above the surface of Yosemite National Park. "Surface" refers to the highest terrain within the park within 2000 feet laterally of the route of flight or, within the Yosemite Valley, the uppermost rim of the valley.

## CALIFORNIA CONDORS Central California Coast Ranges

California Condors are currently being reintroduced to the Central California Coast by the Ventana Wilderness Society. There are two release sites; one below Anderson Peak near Big Sur (BSR VOR radial 150, 2 NM), the other in the Pinnacles National Monument (SNS VOR radial 099, 24 NM). California Condors can be identified in the air by their distinctive size and flight patterns. Like the Turkey Vulture, the California Condor is a large black bird with a naked head which uses topography and associated wind patterns for soaring flight. However, the California Condor is nearly twice as large as the Turkey Vulture, with a wingspan approaching ten feet. Condors normally soar at altitudes between 500 and 6,000 feet AGL. They have been known to fly up to 190 miles in a single day and could therefore be found over a very large area. Please be alert for the presence of these highly endangered birds throughout the Coastal Range from Mt Hamilton near San Jose, south to the Simi Valley, near Fillmore VOR (FIM), as well as the foothills along the west side of the San Joaquin Valley. For further information contact the Ventana Wilderness Society at 831–455–9514.

## CALIFORNIA CONDORS Pinnacles National Monument

California Condors are the largest land birds in North America and are currently being reintroduced at Pinnacles National Monument in central California. Weighing 15–25 pounds and with a wingspan of 9.5 feet, this endangered species presents a formidable in-flight hazard. Condors are capable of soaring at an altitude of 15,000 feet, although they are more often found between altitudes of 2,000–9,000 feet. Using GPS tracking devices on four condors, a high–use condor flight area was identified over Pinnacles National Monument. The Monument is requesting a clearance of 3,000 feet AGL over an approximately 11.5 square mile area, as indicated, where these and other condors are consistently soaring. Monument personnel hope that such a restriction will be a manageable compromise for the continued conservation of this endangered species and the safety of all pilots. For further information, please contact Pinnacles National Monument at (831) 389–4485.

#### GRAND CANYON SPECIAL FLIGHT RULES AREA Effective on September 22, 1988

GRAND CANYON—Special Flight Rules Area, SFAR-50-2. Special regulations apply to all aircraft operations below 14,500 feet MSL. Except in an emergency or if otherwise authorized by the Las Vegas Flight Standards District Office for certain limited operations, remain at or above the following altitudes: a) in the Eastern sector from Lees Ferry to North Canyon at 5,000 feet MSL; b) in the Eastern sector from North Canyon to Boundary Ridge at 6,000 feet MSL; c) in the Central sector from Boundary Ridge to Supai Point at 10,000 feet MSL; d) in the Central sector from Supai Point to Diamond Creek at 9,000 feet MSL; e) in the Western sector from Diamond Creek to the Grand Wash Cliffs at 8,000 feet MSL. In flight corridors use the following altitudes: northbound at 11,500 or 13,500 feet MSL; southbound at 10,500 or 12,500 feet MSL. Remain clear of the indicated flight-free zones.

CAUTION: High volume of tour operations within the area. The procedures do not relieve pilots from see-and-avoid responsibility or compliance with FAR 91.119. Pilots should contact a local FSS for NOTAM information prior to flight within the Special Flight Rules Area. Utilize the Las Vegas (LAS) altimeter setting west of Mt. Dellenbaugh and the Grand Canyon (GCN) altimeter setting east of Mt. Dellenbaugh. Monitor the frequencies indicated for each sector (Western–121.95; Central–127.05; Eastern–120.05). Refer to the Grand Canyon sectional chart and NOTAMS for additional information.

## SPECIAL NORTH ATLANTIC, CARIBBEAN AND PACIFIC AREA COMMUNICATIONS

VHF air-to-air frequencies enable aircraft engaged in flights over remote and oceanic areas out of range of VHF ground stations to exchange necessary operational information and to facilitate the resolution of operational problems.

Frequencies have been designated as follows:

North Atlantic area: 123.45 MHz
Caribbean area: 123.45 MHz
Pacific area: 123.45 MHz

#### **U.S. SPECIAL CUSTOMS REQUIREMENT**

Air Commerce Regulations of the Treasury Department's Customs Service require all private aircraft arriving in the U.S. from a foreign place in the Western Hemisphere, (a) south of 33 degrees north latitude which cross into the U.S. over a point on the U.S./Mexican border between 97 and 120 degrees west longitude, or (b) south of 31 degrees north latitude which enter the U.S. via the Gulf of Mexico and Atlantic Coasts, to provide notice of intended arrival to the Customs Service at least one hour prior to crossing the U.S./Mexican border or the U.S. coastline. This notice may be provided by: (1) radio through an appropriate FAA Flight Service Station, (2) normal FAA flight plan notification procedures (a flight plan filed in Mexico does not meet this requirement due to unreliable relay of data), or (3) directly to the District Director of Customs or other Customs officer at place of first intended landing. Unless an exemption has been granted by Customs, private aircraft are required to make first landing in the U.S. at one of the following designated airports nearest to the point of border or coastline crossing:

Brownsville/South Padre Island International, Corpus Christi International, Del Rio International, El Paso International, Laredo International, Maverick County Memorial International, McAllen Miller International, Presidio-Lely International, Southwest Texas Regional, or William P. Hobby Airport of Texas; Calexico International, or Brown Field Municipal in California; Bisbee Douglas International, Nogales International, Tuscon International, or Yuma MCAS/Yuma International in Arizona; Las Cruces Intl in New Mexico; Lakefront or Louis Armstrong New Orleans Intl in Louisiana; Fort Lauderdale Executive, Fort Lauderdale-Hollywood International, Key West International, Miami International, Opa-Locka Executive Airport, Palm Beach International, St. Lucie County International, or Tampa International in Florida.

#### **MILITARY TRAINING ROUTES**

The DOD Flight Information Publication AP/1B provides textual and graphic descriptions and operating instructions for all military training routes (IR, VR, SR) and refueling tracks/anchors. Complete and more comprehensive information relative to policy and procedures for IRs and VRs is published in FAA Handbook 7610.4 (Special Military Operations) which is agreed to by the DOD and therefore directive for all military flight operations. The AP/1B is the official source of route data for military users.

#### CIVIL USE OF MILITARY FIFI DS

U.S. Army, Air Force, Navy and Coast Guard Fields are open to civil fliers only in emergency or with prior permission.

Army installations, prior permission is required from the Commanding Officer of the installation.

For Air Force installations, prior permission should be requested at least 30 days prior to first intended landing from either Headquarters USAF (PRPOC) or the Commander of the installation concerned (who has authority to approve landing rights for certain categories of civil aircraft). For use of more than one Air Force installation, requests should be forwarded direct to Hq USAF (PRPOC), Washington, D.C. 20330.

Use of USAF installations must be specifically justified.

NAME OF AIRPORT

For Navy and Marine Corps installations, prior permission should be requested at least 30 days prior to first intended landing. An Aviation Facility License must be approved and executed by the Navy prior to any landing by civil aircraft.

Forms and further information may be obtained from the nearest U.S. Navy or Marine Corps aviation activity.

For Coast Guard fields prior permission should be requested from the Commandant, U.S. Coast Guard via the Commanding Officer of the field.

When instrument approaches are conducted by civil aircraft at military airports, they shall be conducted in accordance with the procedures and minimums approved by the military agency having jurisdiction over the airport.

#### AIRCRAFT LANDING RESTRICTIONS

Landing of aircraft at locations other than public use airports may be a violation of Federal or local law. All land and water areas are owned or controlled by private individuals or organizations, states, cities, local governments, or U.S. Government agencies. Except in emergency, prior permission should be obtained before landing at any location that is not a designated public use airport or seaplane base.

Landing of aircraft is prohibited on lands or waters administered by the National Park Service, U.S. Fish and Wildlife Service, U.S. Forest Service, and on many areas controlled by the U.S. Army Corps of Engineers, unless prior authorization is obtained from the respective agency.

#### **FAR-PART 139 CERTIFICATED AIRPORTS**

Additional Certificated Airports not contained in this Directory

IDENT

INDEX

NEVADA

TONOPAH, Tonopah Test Range TNX E

#### **CONTINUOUS POWER FACILITIES**

In order to insure that a basic ATC system remains in operation despite an areawide or catastrophic commercial power failure, key equipment and certain airports have been designated to provide a network of facilities whose operational capability can be utilized independent of any commercial power supply.

In addition to those facilities comprising the basic ATC system, the following approach and lighting aids have been included in this program for a selected runway.

- 1. ILS(Localizer, Glide Slope, COMLO, Inner, Middle and Outer Markers)
- 2. Wind Measuring Capability
- 3. Approach Light System (ALS) or Short ALS (SALS)
- 4. Ceiling Measuring Capability
- 5. Touchdown Zone Lighting (TDZL)
- 6. Centerline Lighting (CL)
- 7. Runway Visual Range (RVR)
- 8. High Intensity Runway Lighting (HIRL)
- 9. Taxiway Lighting
- 10. Apron Light (Perimeter Only)

The following have been designated "Continuous Power Airports," and have independent back up capability for the equipment installed.

u	ipment installed.			
	Airport/Ident	Runway No.	Airport/Ident	Runway No
	Albuquerque, NM (ABQ)	08	Milwaukee, WI (MKE)	01L
	Anchorage, AK (ANC)	07R	Minneapolis, MN (MSP)	30L
	Andrews AFB, MD (ADW)	01L	Nashville, TN (BNA)	02L
	Atlanta, GA (ATL)	09R	New Orleans, LA (MSY)	10
	Baltimore, MD (BWI)	10	New York, NY (JFK)	04R
	Bismarck, ND (BIS)	31	New York, NY (LGA)	22
	Boise, ID (BOI)	10R	Newark, NJ (EWR)	04R
	Boston, MA (BOS)	04R	Oklahoma City, OK (OKC)	35R
	Charlotte, NC (CLT)	36L	Omaha, NE (OMA)	14R
	Chicago, IL (ORD)	14R	Ontario, CA (ONT)	26L
	Cincinnati, OH (CVG)	36C	Philadelphia, PA (PHL)	09R
	Cleveland, OH (CLE)	06R	Phoenix, AZ (PHX)	80
	Dallas/Fort Worth, TX (DFW)	17C	Pittsburgh, PA (PIT)	10L
	Denver, CO (DEN)	35R	Reno, NV (RNO)	16R
	Des Moines, IA (DSM)	31	Salt Lake City, UT (SLC)	34L
	Detroit, MI (DTW)	03R	San Antonio, TX (SAT)	12R
	El Paso, TX (ELP)	22	San Diego, CA (SAN)	09
	Fairbanks, AK (FAI)	01L	San Francisco, CA (SFO)	28R
	Great Falls, MT (GTF)	03	San Juan, PR (SJU)	80
	Honolulu, HI (HNL)	08L	Seattle, WA (SEA)	16C
	Houston, TX (IAH)	26L	St. Louis, MO (STL)	30R
	Indianapolis, IN (IND)	05L	Tampa, FL (TPA)	36L
	Jacksonville, FL (JAX)	07	Tulsa, OK (TUL)	36R
	Kansas City, MO (MCI)	19R	Washington, DC (DCA)	01
	Los Angeles, CA (LAX)	24R	Washington, DC (IAD)	01R
	Memphis, TN (MEM)	36L	Wichita, KS (ICT)	01L
	Miami, FL (MIA)	08R		

NOTE—The existing CPA runway is listed. Pending and future changes at some locations will require a revised runway designation.

## NATURAL GAS FLARE CARLSBAD/CAVERN CITY, NEW MEXICO

A natural gas flare is located at approximately N32–27–50.5/W104–34–24.2 (CNM 300/021), SFC to 4200 feet MSL. Pilots should use caution when operating in this area. For further information, contact Albuquerque AFSS on 1–505–243–7831.

#### SAN DIEGO INTERNATIONAL AIRPORT (SAN) AIRCRAFT NOISE PROHIBITIONS/RESTRICTIONS

No departures or engine run-ups above idle power 0730–1430Z‡. FAR Part 36 Stage 2 departures prohibited 0600–1500Z‡. Per current FAA standards all helicopters are Stage 2. Valid emergency operations or mercy flights exempt from noise abatement restrictions. Operator must provide written report to SAN noise abatement office. Noise monitoring in effect continuously. All operations of aircraft which exceed 104 Effective Perceived Noise Decibels at the takeoff reference point per FAA AC 36 Series documentation are prohibited. Noise sensitive areas all quadrants; recommend pilots use best noise abatement procedures. Pilots are requested to minimize use of reverse thrust consistent with safe operations of aircraft to minimize noise impact on surrounding community. For additional noise level restrictions and information call 619–400–2781

## SPECIAL PROCEDURES SAN FRANCISCO INTERNATIONAL AIRPORT NOISE ABATEMENT PROCEDURES

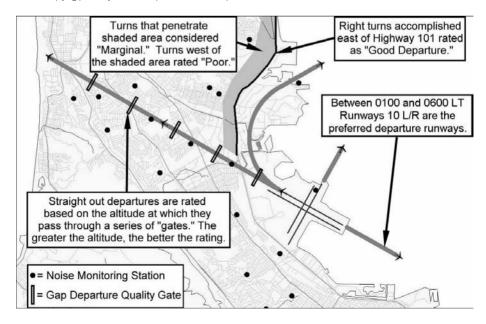
#### Fly Quiet Program:

The Fly Quiet Program was developed to help pilots understand the rules and regulations for noise abatement at SFO and to show the public how well airline's participate in the noise abatement programs. The purpose of the Program is to encourage individual airlines to operate as quietly as possible at SFO. The Program promotes a participatory approach in complying with noise abatement procedures by grading airlines' performance and presenting these scores to the public via a published report. The Program consists of five grading elements:

- 1) The overall noise quality of each airline's fleet operating at SFO.
- 2) A measure of how well each airline complies with the nighttime Preferential Runway Use Program.
- 3) Assessment of how well each airline adheres to the Gap departure profile.
- 4) Assessment of how well each airline adheres to the Shoreline departure profile.
- 5) Evaluation of single overflight noise level exceedances.

Flight Crews: By operating your aircraft as quietly as possible, you can directly influence your airline's Fly Quiet Program score. Here are some guidelines for maintaining a high score in the Fly Quiet Program:

- (a) **Preferential Runway Use Program**—Between 0100 and 0600 (LT) the preferred departure runways for noise abatement are Runways 10 L/R. Pilots of heavy aircraft can significantly improve their airline's Fly Quiet Program scores by departing on Runways 10 L/R (weather permitting).
- (b) Shoreline Departure Turn Quality—The radius of the initial turn after departure off Runways 28 L/R is a grading element of the Fly Quiet Program. Runway 28 L/R departures making excessively wide right turns overfly residential neighborhoods. By completing the initial right turn prior to crossing Highway 101, aircraft remain over industrial and commercial areas. This applies to all Instrument Departure Procedures (IDPs) requiring right turns after departing Runways 28 L/R.
- (c) Gap Departure Climb Quality—Aircraft making straight out departures off Runways 28 L/R overfly heavily populated areas immediately west of the airport. Since "higher is quieter," the Airport monitors aircraft altitudes along the departure route. Scores are assigned at specific points, or gates, set approximately one mile apart, with higher scores given to those aircraft that reach higher altitudes at the gates. It is preferred that aircraft making straight-out departures from Runways 28 L/R climb as rapidly as possible.
- (d) Noise Exceedance Rating—Maximum noise level limits are established for selected noise monitor stations surrounding SFO. Pilots can improve their airline's exceedance rating by utilizing the Preferential Runway Use Program and complying precisely with the Gap and Shoreline Departure Procedures.



# SPECIAL PROCEDURES SAN FRANCISCO INTERNATIONAL AIRPORT NOISE ABATEMENT PROCEDURES PREFERENTIAL RUNWAYS

The SFO Nighttime Preferential Runway Use Program is a voluntary Program that was developed in 1988. SFO operates on two sets of parallel runways for both arrivals and departures, based on this runway configuration, there are three preferred nighttime preferential runway procedures:

- 1) The primary goal of the Program is to use Runways 10 L/R for take-off because they offer departure routing over the bay which will reduce the noise impacts over the communities surrounding SFO.
- 2) When departures from Runways 10 L/R are not possible, the second preference would be to depart Runways 28 L/R on the Shoreline or Quiet Departure Procedures. Both of these Procedures incorporate an immediate right turn after departure to avoid residential communities northwest of SFO.
- 3) The third preference is to depart on Runways 01 L/R. While this procedure directs aircraft over the bay, jet blast from these departures affects communities south of SFO.

The least desirable departure procedure at SFO is a straight—out departure on Runways 28 L/R these departures overfly densely populated communities immediately west of SFO and are discouraged at all hours.

The Airport Director has established a Nighttime Noise Clearance Center operated during 2200–0700 by a duty officer whose responsibilities include monitoring compliance with SFO's Preferential Runway Use Program and responding to requests for exemptions to the noise regulations.

#### **ENGINE RUN-UP RESTRICTIONS**

Run-ups of mounted aircraft engines for maintenance or test purposes is prohibited between the hours of 2200-0700 daily except as provided below:

- 1) An idle check of a single engine is allowed under the following conditions:
  - (a) An idle check of a single engine not to exceed a 5-minute duration may be conducted in the lease hold area. If more than one engine is to be checked, each engine must be checked separately and the cumulative duration of the idle checks cannot exceed 5-minutes.
  - (b) An idle check of a single engine or multiple engines (checked separately) which will exceed a duration of five minutes will be accomplished in the designated run-up areas. For purposes of noise abatement monitoring, this will be considered a power run-up.

During the hours of 2200–0700, the Operations Supervisor shall be called and permission received prior to any engine idle check or engine idle run-up, including any idle run for more than a cumulative duration of 5-minutes.

During other hours, the Operations Supervisor shall be called and permission received prior to any engine run-up. Any request for an engine run-up during the hours 2200-0700, other than that described above, which is the result of unusual or emergency circumstances, may be approved by the Nighttime Noise Clearance Center.

When approved and accomplished, the Maintenance Supervisor of the airline concerned must provide to the Airport Director a monthly report detailing the following:

- (a) Date and time of the run-up
- (b) Type of aircraft
- (c) Aircraft identification number
- (d) Location of the run-up
- (e) Duration of the run-up
- (f) An explanation of the unusual or emergency circumstances making the run-up necessary

Reports will be submitted to the Airport Director, Attn: Airport Operations within three working days after the last day of each calendar month.

## SPECIAL PROCEDURES SAN FRANCISCO INTERNATIONAL AIRPORT NOISE ABATEMENT PROCEDURES

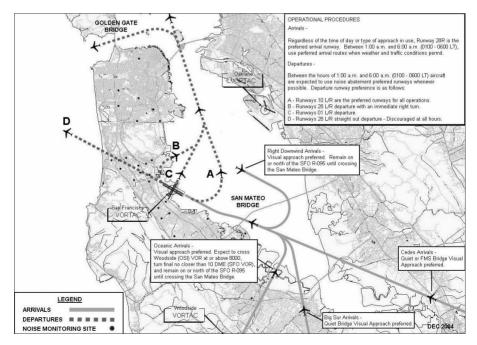
#### APU OPERATING RESTRICTIONS

Operators are encouraged to use ground power and air sources whenever practicable. APUs may be used when aircraft are being towed.

- 1) Domestic terminals—Use of APUs is prohibited between the hours of 2200–0600 except 30 minutes prior to departure, when passengers are aboard, or it is needed to test other aircraft equipment.
- 2) International Terminal—The following procedures apply:
  - (a) Aircraft scheduled to be at a gate in Boarding Areas A and G for more than 45 minutes between the hours of 0700–2200, are required to use 400Hz ground power and pre–conditioned air, where available. APUs are not authorized without prior permission is received from Airport Operations, during the use of ground power and pre–conditioned air until 30 minutes prior to push–back.
- (b) All aircraft scheduled to be at an International Terminal gate between 2200–0700 hours are required to use 400Hz ground power and pre-conditioned air, where available, regardless of scheduled time at the gate. APUs are not authorized, unless prior permission is received from Airport Operations, during the use of ground power and pre-conditioned air until 30 minutes prior to push-back.

#### NOISE MONITORING SYSTEM

As of January 2005, the Airport installed a new Aircraft Noise Management System (ANMS) utilizing Lochard's Airport Noise and Operations Monitoring System (ANOMS(tm)) 8 product suite. This system consists of 29 fixed Environmental Monitoring Units (EMU) and four portable units. The previous passive radar system was replaced with Lochard's new hybrid, SkyTrak(tm), an integration of the FAA ARTS IIIE and live Mode S with passive radar that will drive the SFO community web site and deliver flight data throughout the airport.



#### CONTACT INFORMATION

For more information about the Fly Quiet Program or noise abatement procedures contact 650-821-5100.

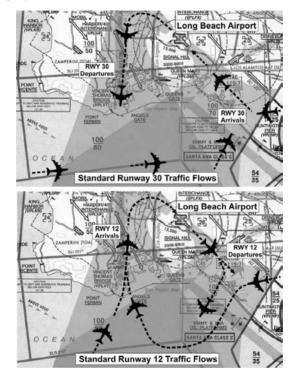
### AIR CARRIER OPERATIONS VICINITY OF LONG BEACH (DAUGHERTY FIELD), CA.

A wide mix of aircraft types including Air Carriers landing and departing Long Beach Daugherty Field, utilize the airspace south of Long Beach Airport (Daugherty Field) (LGB), Long Beach, California. The Class E airspace between Point Vicente, Catalina Island, and Huntington Beach accommodates pilot training from local flight schools, numerous IFR and VFR enroute aircraft, and helicopter and other aviation activities.

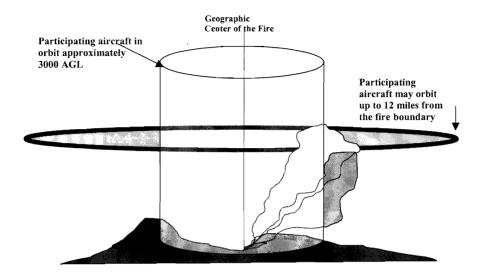
Participating flight training aircraft in Class E airspace south of Long Beach may:

- Utilize helicopter frequency 129.0 at or below 1,000 MSL.
- Utilize air-to-air frequency 121.95 above 1,000 MSL and below 4,500 MSL.
- Participants are encouraged to make position reports relative to Palos Verde Point, Point Vicente and Point Fermin, Angels Gate, Queens Gate, Emmy & Eva Oil Platforms and the Queen Mary.

VFR flight following may be available from SOCAL TRACON as indicated on the LA Terminal Area Chart.



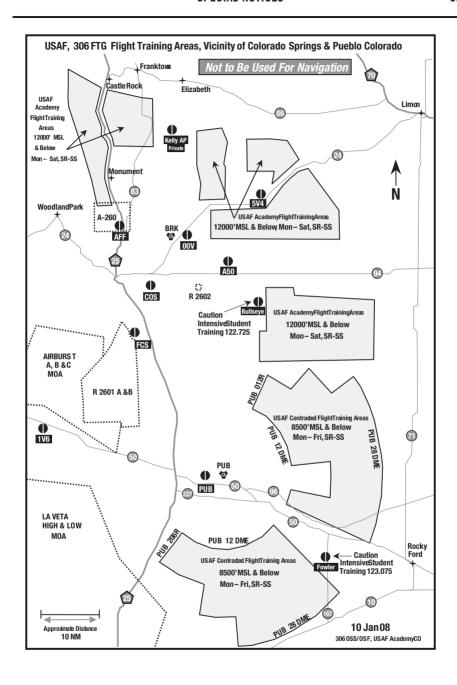
#### **FIREFIGHTING TRAFFIC AREAS**



Pilots are advised to stay clear of Firefighting Traffic Areas. Remain 15 miles from the area of activity. If you must over-fly the area, do so at an altitude of 5000 feet AGL above. However, to remain safe and out of the way of working aircraft, it is best to circumnavigate the area.

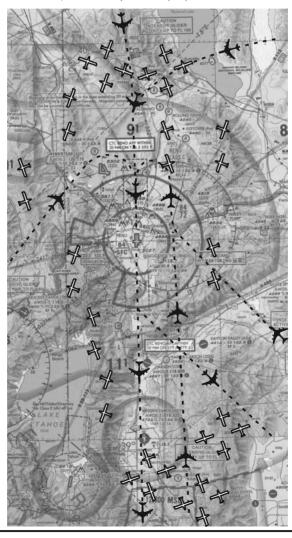
The wild-land fire environment can be very complex and involve a large number and variety of aircraft types including fixed and rotary wing aircraft. Some of the aircraft are small single and multi-engine command and control platforms that can be especially difficult to see and may give the appearance that the fire is not staffed. The aircraft participating in firefighting can orbit as far out as 12 miles from the perimeter of the fire. Any intrusion by aircraft not directly involved in the firefighting operation could delay the delivery of much needed retardant or water to ground firefighters and will adversely affect the safety of participating aircraft. Please stay well away from wild-land fires even if you feel that aircraft are not working the fire; they may be en route or unseen.

If you see a fire developing along your route, report it immediately to air traffic control who will advise the US Forest Service. The firefighting community would welcome this information



## GLIDER/SOARING ACTIVITIES AROUND THE RENO-TAHOE INTERNATIONAL AIRPORT

There is intense glider activity up to FL180 near the Reno-Tahoe International Airport. Gliders conduct aerobatic maneuvers and other soaring activities in airspace on or near arrival routes, departure routes, final approach courses and holding fixes for the Reno-Tahoe International Airport. Gliders operations may originate from the Air Sailing, Minden-Tahoe and Truckee (California) Airports. The Air Sailing Airport is located near the Mustang (FMG) 337 radial at 20 nautical miles, between Anaho, Pyram and Takle intersections. The Minden-Tahoe Airport is located near the FMG 172 radial at 32 nautical miles, between J5 and J94. The Truckee California Airport is located near the FMG 25 radial at 26 nautical miles, north of the Squaw Valley VOR between J32 and V392. Federal Aviation Regulations do not require gliders operators to equip, activate or to broadcast the location of their aircraft via transponder or radio communications while operating outside of Class A or C Airspace. Atmospheric conditions attract large quantities of gliders to the area and activity near mountain ridges or "hot spots" may be intense. Altitudes up to 17,999 have been observed and pilots should exercise due diligence when exiting Class A and C airspace. Pilots are encouraged to refer to the SFO Sectional Aeronautical Chart and to the remarks in the Airport/Facility Directory, Southwest US for the Reno-Tahoe International Airport (RNO) regarding glider activity. For further information, call Reno ATC1/TRACON at (775) 784–5582.



The following narratives summarize the FAR Part 93 Special Air Traffic Rules, and Airport Traffic Patterns in effect as prescribed in the rule. This information is advisory in nature and in no way relieves the pilot from compliance with the specific rules set forth in FAR Parts 91 and 93.

Special Airport Traffic Areas prescribed in Part 93 are depicted on Sectional Aeronautical Charts, World Aeronautical Charts, Enroute Low Altitude Charts, and where applicable, on VFR Terminal Area Charts.

#### OPERATIONS RESERVATIONS FOR HIGH DENSITY TRAFFIC AIRPORTS KENNEDY, LAGUARDIA, AND WASHINGTON REAGAN NATIONAL

The Federal Aviation Administration (FAA) has designated New York's Kennedy and LaGuardia Airports and Washington Reagan National Airport as High Density Traffic Airports (HDTA), Title 14, Code of Federal Regulations, part 93, subpart K, and has prescribed air traffic rules and requirements for operating aircraft (excluding helicopters) to and from those airports during certain hours.

Reservations are required for operations from 6 a.m. through 11:59 p.m. local time at LaGuardia Airport and Washington Reagan National Airport. Reservations at Kennedy Airport are required from 3 p.m. through 7:59 p.m. local time.

Reservation procedures are detailed in Advisory Circular 93–1, Reservations for Unscheduled Operations at High Density Traffic Airports. A copy of the advisory circular is available on the FAA website at <a href="http://www.faa.gov">http://www.faa.gov</a>. Reservations for unscheduled operations are allocated through the Enhanced Computer Voice Reservation System (e-CVRS) accessible via telephone or the Internet. This system may not be used to make reservations for scheduled air carrier or commuter flights.

The toll–free telephone number for accessing e–CVRS is 1–800–875–9694 and is available for calls originating within the United States, Canada, and the Caribbean. Users outside the toll–free areas may access e–CVRS by calling the toll number of 703–707–0568. The Internet web address for accessing the e–CVRS is <a href="http://www.fly.faa.gov/ecvrs">http://www.fly.faa.gov/ecvrs</a>. If you have any questions about reservation requirements or are experiencing problems with the system, you may telephone the Airport Reservation Office at the Air Traffic Control System Command Center at (703) 904–4452.

Requests for instrument flight rules (IFR) reservations will be accepted beginning 72 hours prior to the proposed time of operation at the high–density airport. For example, a request for an 11 a.m. reservation on a Thursday will be accepted beginning at 11 a.m. on the previous Monday.

IFR reservations must be obtained prior to IFR landing or takeoff at an HDTA during slot controlled hours. An air traffic control (ATC) clearance does not constitute a reservation. A reservation does not constitute permission to operate at an HDTA if additional operational limits or procedures are required by NOTAM and/or regulation.

Aircraft involved in medical emergencies will be handled by ATC without regard to a reservation after obtaining prior approval of the ATC System Command Center on (703) 904–4452. ATC will accommodate declared other emergency situations without regard to slot reservations.

NOTE: Visual flight rule (VFR) reservations via ATC for unscheduled operations at LaGuardia are not authorized from 7 a.m. through 8:59 a.m. local time and 4 p.m. through 6:59 p.m. local time, Monday through Friday and Sunday evenings, unless otherwise announced by NOTAM. Both IFR and VFR operations during those time periods must obtain an advance reservation through e–CVRS.

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#### FSS TELEPHONE NUMBERS

Flight Service Station (FSS) facilities provide flight planning and weather briefing services to pilots. FSS services in the contiguous United States, Hawaii and Puerto Rico, are provided by a network of large hub facilities and smaller remote facilities which are interconnected with the hubs.

Selected remote FSS facilities across the contiguous United States have variable part—time operating hours. Because of the interconnectivity between remote and hub facilities, all FSS services are available continuously using published telephone numbers and radio frequencies.

Telephone Information Briefing Service (TIBS) is the FSS service that provides continuous recordings of meteorological and/or aeronautical information including area and/or route briefings, airspace procedures and special announcements. A touch-tone telephone is required to fully utilize this service.

Further information can be found in the Aeronautical Information Manual (AIM).

#### NATIONAL FSS TELEPHONE NUMBER

#### OTHER FSS TELEPHONE NUMBERS (except in Alaska)

TIBS (see description above)	1-800-4TIBS-WX (1-877-484-2799)
Clearance Delivery Only	1-888-766-8267
Lifeguard Flights Only	1-877-LIF-GRD3 (1-877-543-4733)
Flights within DC SFRA & FRZ *	1-866-225-7410

<sup>\*</sup> District of Columbia Special Flight Rules Area & Flight Restricted Zone

# KEY to AERODROME FORECAST (TAF) and AVIATION ROUTINE WEATHER REPORT (METAR)

TAF KPIT 091730Z 091818 15005KT 5SM HZ.FEW020 WS010/31022KT FM1930 30015G25KT 3SM SHRA OVC015 TEMPO 2022 1/2SM +TSRA OVC008CB

FM0100 27008KT 5SM SHRA BKN020 OVC040 PROB40 0407 1SM -RA BR FM1015 18005KT 6SM -SHRA OVC020 BECMG 1315 P6SM NSW SKC

METAR KPIT 091955Z COR 22015G25KT 3/4SM R28L/2600FT TSRA OVC010CB 18/16 A2992 RMK SLP045 T01820159

Forecast	Explanation	Report
TAF	Message type: <u>TAF-routine or <u>TAF AMD-amended forecast</u>, <u>METAR-hourly</u>, <u>SPECI-special or <u>TESTM-non-commissioned ASOS</u> report</u></u>	METAR
KPIT	ICAO location indicator	KPIT
091730Z	Issuance time: ALL times in UTC "Z", 2-digit date, 4-digit time	091955Z
091818	Valid period: 2-digit date, 2-digit beginning, 2-digit ending times	
	In U.S. <b>METAR</b> : <u>COR</u> rected ob; or <u>AUTO</u> mated ob for automated report with no human intervention; omitted when observer logs on	COR
15005KT	Wind: 3 digit true-north direction, nearest 10 degrees (or VaRiaBle); next 2-3 digits for speed and unit, KT (KMH or MPS); as needed, Gust and maximum speed; 00000KT for calm; for METAR, if direction varies 60 degrees or more, Variability appended, e.g. 180V260	22015G25KT
5SM	Prevailing visibility: in U.S., Statute Miles & fractions; above 6 miles in TAF Plus6SM. (Or, 4-digit minimum visibility in meters and as required, lowest value with direction)	3/4SM
	Runway Visual Range: R; 2-digit runway designator Left, Center, or Right as needed; '/"; Minus or Plus in U.S., 4-digit value, FeeT in U.S., (usually meters elsewhere); 4-digit value Variability 4-digit value (and tendency Down, Up or No change)	R28L/2600FT
HZ	Significant present, forecast and recent weather: see table (on back)	TSRA
FEW020	Cloud amount, height and type: SKy Clear 0/8, FEW >0/8-2/8, SCaTtered 3/8-4/8, BroKeN 5/8-7/8, OVerCast 8/8; 3-digit height in hundreds of ft; Towering CUmulus or CumulonimBus in METAR; in TAF, only CB. Vertical Visibility for obscured sky and height "VV004". More than 1 layer may be reported or forecast. In automated METAR reports only, CLeaR for "clear below 12,000 feet"	OVC010CB
	Temperature: degrees Celsius; first 2 digits, temperature "/" last 2 digits, dew-point temperature; Minus for below zero, e.g., M06	18/16
	Altimeter setting: indicator and 4 digits; in U.S., A-inches and hundredths; (Q-hectoPascals, e.g., Q1013)	A2992

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### KEY to AERODROME FORECAST (TAF) and **AVIATION ROUTINE WEATHER REPORT** (METAR)

Forecast	Explanation	Report
WS010/31022KT	In U.S. <b>TAF</b> , non-convective low-level (≤2,000 ft) <u>Wind Shear;</u> 3-digit height (hundreds of ft); "/"; 3-digit wind direction and 2-3 digit wind speed above the indicated height, and unit, <u>KT</u>	
	In <b>METAR</b> , <u>ReMarK</u> indicator & remarks. For example: <u>Sea-Level Pressure in hectoPascals &amp; tenths</u> , as shown: 1004.5 hPa; <u>Temp/dew-point in tenths</u> °C, as shown: temp. 18.2°C, dew-point 15.9°C	RMK SLP045 T01820159
FM1930	<u>FroM</u> and 2-digit hour and 2-digit minute <b>beginning</b> time: indicates significant change. Each FM starts on new line, indented 5 spaces.	
TEMPO 2022	TEMPOrary: changes expected for < 1 hour and in total, < half of 2-digit hour <b>beginning</b> and 2-digit hour <b>ending</b> time period	
PROB40 0407	PROBability and 2-digit percent (30 or 40): probable condition during 2-digit hour <b>beginning</b> and 2-digit hour <b>ending</b> time period	
BECMG 1315	BECoMinG: change expected during 2-digit hour beginning and 2-digit hour ending time period	

Table of Significant Present, Forecast and Recent Weather - Grouped in categories and used in the order listed below; or as needed in TAF, No Significant Weather.

QUAL	IFIER						
Intensit	y or Proximity						
- Ligi	ht '	"no s	sign* Moderate	+ F	łeavy		
VC V	/icinity: but not a	at ae	rodrome; in U.S. MI	ETA	R, between 5 and 10	SM	of the point(s) of
٥	bservation; in U.	J.S. <b>T</b>	AF, 5 to 10SM from	ı cei	nter of runway comp	lex (	elsewhere within 8000m)
Descrip					, ,	,	,
MIS	hallow I	BC	Patches	PR	Partial	TS	Thunderstorm
BL B	Blowing S	SH	Showers	DR	Drifting	FΖ	Freezing
WEAT	HER PHENO	ME	NA				
Precipit	tation						
				SN	Snow	SG	Snow grains
IC Ic	e crystals	PL I	ce pellets	GR	Hail	GS	Small hail/snow pellets
UP (	UP Unknown precipitation in automated observations						
Obscur	ation						
					Smoke	V۸	Volcanic ash
SA S	Sand I	HZ	Haze	PΥ	Spray	DU	Widespread dust
Other							
					Duststorm	PO	Well developed
FC F	unnel cloud -	+FC	tornado/waterspout				dust/sand whirls

- Explanations in parentheses "()" indicate different worldwide practices.

- Ceiling is not specified; defined as the lowest broken or overcast layer, or the vertical visibility.
   NWS TAFs exclude turbulence, icing & temperature forecasts; NWS METARs exclude trend fcsts
   Although not used in US, Ceiling And Visibility OK replaces visibility, weather and clouds if: visibility ≥10 km; no cloud below 5000 ft (1500 m) or below the highest minimum sector altitude, whichever is greater and no CB; and no precipitation, TS, DS, SS, MIFG, DRDU, DRSA or DRSN.

  UNITED STATES DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration—National Weather Service NOAA/PA 96052

## FAA AND NWS KEY AIR TRAFFIC FACILITIES

## **Air Traffic Control System Command Center**

Main Number......703–904–4400

RGNL AIR TRAFFIC DIVISIONS		
REGION	TELEPHONE	
Alaskan	907-271-5464	
Central	816-329-2500	
Eastern	718-553-4502	
Great Lakes	847-294-7202	
New England	781-238-7500	
Northwest Mountain	425-227-2500	
Southern	404-305-5500	
Southwest	817-222-5500	
Western Pacific	310-725-6500	

## AIR ROUTE TRAFFIC CONTROL CENTERS (ARTCCs)

ARTCC NAME	*24 HR RGNL DUTY OFFICE TELEPHONE #	BUSINESS HOURS	BUSINESS TELEPHONE #
Albuquerque	817-222-5006	7:30 a.m4:00 p.m.	505-856-4300
Anchorage	907-271-5936	7:30 a.m4:00 p.m.	907-269-1137
Atlanta	404-305-5180	7:30 a.m5:00 p.m.	770-210-7601
Boston	617-238-7001	7:30 a.m4:00 p.m.	603-879-6633
Chicago	847-294-8400	8:00 a.m4:00 p.m.	630-906-8221
Cleveland	847-294-8400	8:00 a.m4:00 p.m.	440-774-0310
Denver	425-227-1389	7:30 a.m4:00 p.m.	303-651-4100
Ft. Worth	817-222-5006	7:30 a.m4:00 p.m.	817-858-7300
Houston	817-222-5006	7:30 a.m4:00 p.m.	281-230-5300
Indianapolis	847-294-8400	8:00 a.m4:00 p.m.	317-247-2231
Jacksonville	404-305-5180	8:00 a.m4:30 p.m.	904-549-1501
Kansas City	816-329-3000	7:30 a.m4:00 p.m.	913-254-8500
Los Angeles	661-265-8200	7:30 a.m4:00 p.m.	661-265-8200
Memphis	404-305-5180	7:30 a.m4:00 p.m.	901-368-8103
Miami	404-305-5180	7:00 a.m3:30 p.m.	305-716-1500
Minneapolis	847-294-8400	8:00 a.m4:00 p.m.	651-463-5580
New York	718-995-5426	8:00 a.m4:40 p.m.	516-468-1001
Oakland	310-725-3300	6:30 a.m3:00 p.m.	510-745-3331
Salt Lake City	425-227-1389	7:30 a.m4:00 p.m.	801-320-2500
Seattle	425-227-1389	7:30 a.m4:00 p.m.	253-351-3500
Washington	718-995-5426	8:00 a.m4:30 p.m.	703-771-3401

## MAJOR TERMINAL RADAR APPROACH CONTROLS (TRACONS)

TRACON NAME	*24 HR RGNL DUTY OFFICE TELEPHONE #	BUSINESS HOURS	BUSINESS TELEPHONE #
Atlanta	404-305-5180	7:00 a.m3:30 p.m.	404-669-1200
Chicago	847-294-8400	8:00 a.m4:00 p.m.	847-608-5509
Dallas/Ft. Worth	817-222-5006	7:30 a.m4:00 p.m.	972-615-2500
Denver	425-227-1389	7:30 a.m4:00 p.m.	303-342-1500
Houston	817-222-5006	7:30 a.m4:00 p.m.	281-230-8400
New York	718-995-5426	8:00 a.m4:30 p.m.	516-683-2901
Northern CA	310-725-3300	7:00 a.m3:30 p.m.	916-366-4001
Southern CA	310-725-3300	7:30 a.m4:00 p.m.	858-537-5800
Southern CA	310-725-3300	7:30 a.m4:00 p.m.	858-537-5800

<sup>\*</sup>Facilities can be contacted through the RgnI Duty Officer during non-business hours.

## FAA AND NWS KEY AIR TRAFFIC FACILITIES

## **DAILY NAS REPORTABLE AIRPORTS**

	*24 HR RGNL		
AIRPORT	DUTY OFFICE	BUSINESS	BUSINESS
NAME	TELEPHONE #	HOURS	TELEPHONE #
Albuquerque Intl Sunport, NM	817-222-5006	8:00 a.m5:00 p.m.	505-842-4366
Andrews AFB, MD	718-995-5426	8:00 a.m4:30 p.m.	301-735-2380
Baltimore/Washington			
Intl Thurgood Marshall, MD	718-995-5426	8:00 a.m4:30 p.m.	410-962-3555
Boston Logan Intl, MA	781–238–7001	7:30 a.m4:00 p.m.	617-455-3100
Bradley Intl, CT	617-238-7001	7:30 a.m4:00 p.m.	203-627-3428
Burbank/Bob Hope, CA	310-725-3300	7:00 a.m.–5:30 p.m.	818-567-4806
Charlotte Douglas Intl, NC Chicago Midway, IL	404–305–5180 847–294–8400	8:00 a.m4:30 p.m. 8:00 a.m4:00 p.m.	704–344–6487 773–884–3670
Chicago O'Hare Intl, IL	847-294-8400	8:00 a.m.–4:00 p.m.	773-601-7600
Cleveland Hopkins Intl, OH	847-294-8400	8:00 a.m.–4:00 p.m.	216-898-2020
Covington/Cincinnati, OH	708-294-7401	8:00 a.m.–4:30 p.m.	606-767-1006
Dallas/Ft. Worth Intl, TX	817-222-5006	8:30 a.m.–5:00 p.m.	972-615-2531
Dayton Cox Intl, OH	847-294-8400	7:30 a.m.–4:00 p.m.	937-454-7300
Denver Intl, CO	425–227–1389	7:30 a.m.–4:00 p.m.	303-342-1600
Detroit Metro, MI	847-294-8400	8:00 a.m4:00 p.m.	734–955–5000
Fairbanks Intl. AK	907-271-5936	7:30 a.m4:00 p.m.	907-474-0050
Fort Lauderdale Intl, FL	404–305–5180	7:00 a.m3:30 p.m.	305–356–7932
George Bush		·	
Intercontinental/Houston, TX	817-222-5006	7:30 a.m4:00 p.m.	713-230-8400
Hartsfield-Jackson Atlanta Intl, GA	404-305-5180	7:00 a.m3:30 p.m.	404-669-1200
Honolulu Intl, HI	310-643-3200	7:30 a.m4:00 p.m.	808-840-6100
Houston Hobby, TX	817-222-5006	8:00 a.m5:00 p.m.	713-847-1400
Indianapolis Intl, IN	847-294-8400	8:00 a.m4:00 p.m.	317-484-6600
Kahului/Maui, HI	310-643-3200	7:30 a.m4:00 p.m.	808-877-0725
Kansas City Intl, MO	816-329-3000	7:30 a.m4:00 p.m.	816-329-2700
Las Vegas McCarran, NV	310-725-3300	7:30 a.m4:00 p.m.	702-262-5978
Los Angeles Intl, CA	310-725-3300	7:00 a.m3:30 p.m.	310-342-4900
Louis Armstrong New Orleans Intl, LA	817-222-5006	7:00 a.m4:30 p.m.	504-471-4300
Memphis Intl, TN	404–305–5180	7:30 a.m4:00 p.m.	901–322–3350
Miami Intl, FL	404–305–5180	7:00 a.m4:00 p.m.	305-869-5400
Minneapolis/St. Paul, MN	847-294-8400	8:00 a.m4:00p.m.	612-713-4000
Nashville Intl, TN	404–305–5180	7:00 a.m3:30 p.m.	615-781-5460
New York Kennedy Intl, NY New York La Guardia, NY	718–995–5426 718–995–5426	8:00 a.m4:30 p.m. 8:00 a.m4:30 p.m.	718–656–0335 718–335–5461
Newark Liberty Intl, NJ	718-995-5426	8:00 a.m.–4:30 p.m.	973-645-3103
Norman Y. Mineta San Jose Intl, CA	310-643-3200	7:30 a.m.–4:00 p.m.	408-982-0750
Ontario Intl, CA	310-643-3200	7:30 a.m.–4:00 p.m.	909-983-7518
Orlando Inti, FL	404-305-5180	7:30 a.m.–5:00 p.m.	407-850-7000
Philadelphia Intl, PA	718-995-5426	8:00 a.m4:30 p.m.	215-492-4100
Phoenix Sky Harbor Intl, AZ	310-643-3200	7:30 a.m.–4:00 p.m.	602–379–4226
Pittsburgh Intl, PA	718-995-5426	8:00 a.m4:30 p.m.	412-269-9237
Portland Intl, OR	425-227-1389	7:30 a.m4:00 p.m.	503-493-7500
Raleigh-Durham, NC	404-305-5180	8:00 a.m4:30 p.m.	919-840-5544
Ronald Reagan Washington			
National, DC	718-995-5426	8:00 a.m4:30 p.m.	703-413-1535
Salt Lake City, UT	425-227-1389	7:30 a.m4:00 p.m.	801-325-9600
San Antonio Intl, TX	817-222-5006	8:00 a.m4:30 p.m.	210-805-5507
San Diego Lindbergh Intl, CA	310-725-3300	8:00 a.m4:30 p.m.	619-299-0677
San Francisco Intl, CA	310-643-3200	7:00 a.m3:30 p.m.	650-876-2883
San Juan Intl, PR	404-305-5180	7:30 a.m5:00 p.m.	809-253-8663
Seattle-Tacoma Intl, WA	425-227-1389	7:30 a.m4:00 p.m.	206-768-2900
St. Louis Lambert, MO	816-329-3000	7:30 a.m4:00 p.m.	314-890-1000
Tampa Intl, FL	404–305–5180	7:30 a.m.–4:00 p.m.	813-371-7700
Ted Stevens Anchorage Intl, AK	907-271-5936	7:30 a.m4:00 p.m.	907-271-2700
Teterboro, NJ	718-995-5426	8:00 a.m4:30 p.m.	201–288–1889
Washington Dulles Intl, DC	718-995-5426	8:00 a.m4:30 p.m.	703-661-6031
West Palm Beach, FL	404–305–5180 718–995–5426	8:00 a.m4:30 p.m.	407–683–1867 914–948–6520
Westchester Co, NY	110-990-0420	8:00 a.m4:30 p.m.	914-948-0020

<sup>\*</sup>Facilities can be contacted through the RgnI Duty Officer during non-business hours.

Air Route Traffic Control Center frequencies and their remoted transmitter sites are listed below for the coverage of this volume. Bold face type indicates high altitude frequencies, light face type indicates low altitude frequencies. To insure unrestricted IFR operations within the high altitude enroute sectors, the use of 720 channel communications equipment (25 kHz channel spacing) is required.

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RALBUOUEROUE CENTER - 134.6 132.8
                                                                  H-4-5-6-7, L-5-6-7-8-10-15-17-19
  Alamogordo - 132.65 132.65
  Animas - 134.45 133.0
                                                                                               (KZAB)
  Carlshad - 135 875
  Childs Peak - 135.15 132.45 126.45 125.25
  Clines Corner - 133.65 133.65 132.8 125.075
  El Paso B - 128.2 125.525
  Globe Nr 1 - 135.725 132.9 132.9
  Globe Nr 2 - 135.15 133.85 132.35 132.35 125.4
  Mesa Rica - 125.075 119.45
  Mount Dora - 133.05 127.85
  Prescott - 135.325 134.325 128.45
  Raton - 132.8
  Roswell - 132.65 132.65
  Sandia Mountain - 132.8
  Silver City - 134.45
  Tesuque Peak - 132.8
  Truth or Consequences - 128.2
  Tucson - 134.45 133.0
  Tucumcari - 132.32 126.92 126.85 119.45
  West Mesa - 134.6 133.65 133.65 124.325 119.45
  Winslow - 128.125 124.5
  Zuni - 134.6 132.9 132.9 124.325 120.55
RDENVER CENTER - 125.9
                                                           H-1-2-3-4-5-6, L-8-9-10-11-12-13-14-15
  Alamosa - 128.375
                                                                                               (KZDV)
  Aspen - 134.5 132.85 125.35 119.85
  Brush A - 133.95
  Brush B - 118.475
  Cortez - 134.7 118.575
  Denver - 133.4 132.85 128.65 126.875 125.95
  Denver A - 126.5
  Denver B - 119.85
  Durango - 118.575
  Eastonville - 134.975
  Farmington - 128.125 125.675 118.575
  Goodland - 132.5
  Grand Mesa - 135.125 134.275 126.725 125.675
  Grand Mesa A - 125.35
  Grand Mesa B - 134.5
  Gunnison - 133.525 125.35
  Hanksville - 127 55
  Hayden - 128.325 120.475
  Kremmling - 132.85 128.65
  La Junta - 134.125 133.4 132.225 128.37
  Montrose - 125.35
  Ogallala - 126.325 132.7
  Pueblo - 135.4 132.225 128.375
  Tuba City - 132.875 127.55 118.225
  Walton Peak - 126.5
RL. A. CENTER
                                                                           H-3-4, L-3-4-5-7-8-9, A-2
  Arr-Dep U.S. - 135.45 134.55 134.4 133.4 132.15 128.05 127.4 126.4 126.0 119.0
                                                                                               (KZLA)
  Bakersfield - 127.1
  Baldwin Hills - 132.85
  Barstow - 134.65 133.55 132.5 132.3 126.35 125.725
  Blythe - 134.475 127.525
  Cedar City - 135.55 135.25 127.35 124.2
  Edom Hill - 133.75 126.7
  Julian - 127.525 126.775
  Keeler - 124.625 124.625
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Laguna - 128.6 128.15 125.65 125.65 119.95

Lebec - 135.3 128.375

Mount Potosi - 132.625 124.625 124.625 Nelson - 134.65 127.35 124.85 124.2 118.025

Ontario - 125.65

Palmdale - 132.5 125.275 Peach Springs - 128.075

Pleasants Peak - 132.85 125.275 119.95

Riverside - 126.35

Saddle Peak - 132.6 125.8

San Luis Obispo - 119.05

Santa Barbara - 135.5 132.15 126.525 119.05

Santa Catalina - 134.575

Seligman - 133.2 124.85

Tonopah - 124.625

Twentynine Palms - 133.2 128.15 126.35

Whittier - 125.275 Yuma - 126.775

(R)OAKLAND CENTER

Angels Camp - 134.375 132.95 127.95 126.85 121.25 119.75

H-3-4, L-2-3-7-5-9-11, A-2 (KZOA)

Bishop - 125.75 Fallon - 134.45 128.8

Ferndale - 134.15 134.15

Fresno - 134.375 133.7 132.8 126.9 123.8

Half Moon Bay - 134.15 134.15 127.45 125.45 119.475

Hollister - 127.45

Mina - 132.05 127.175 125.75

Mount Tamalpais - 127.8

Priest - 134.55 133.7 132.8 128.7 126.9

Red Bluff - 134.975 132.2 119.975

Reno - 134.45 128.8

Sacramento - 132.95

San Luis Obispo - 128.7

South Lake Tahoe - 134.3

Squaw Valley - 127.95 Tonopah - 132.05 125.75

Ukiah - 134.975 132.2 127.8 119.975

H-1-2-3, L-9-11-12-13-14

(KZLC)

RSALT LAKE CITY CENTER Battle Mountain - 132.25 128.725

Brvce Canvon - 133.6

Cedar City - 125.575 125.575

Delle - 132.025 128.55 128.55

Delta - 127.825 125.575

Elko - 132.25 128.725

Elv - 133.45

Fairfield - 133.9

Francis Peak - 135.775 127.7 119.95

Hanksville - 133.6 133.6

Myton - 135.775 119.95

Sunnyside - 133.9 127.925 127.925 125.575

Tonopah - 133.45 133.45

Wilson Creek - 134.525 133.45 133.45 127.925 127.925

Winnemucca - 132.25

**®**SEATTLE CENTER H-1-3, L-1-2-11-13

Antelope Mountain - 124.85

Arcata - 124.85

Ferndale - 135.15 124.85

Klamath Falls - 134.9 127.6

(KZSE)

VHF frequencies available at Flight Service Stations and at their remote communication outlets (RCO's) are listed below for the coverage of this volume. Frequencies in bold type are available all altitudes but recommended for use FL180 and above. "T" indicates transmit only and "R" indicates receive only. RCO's available at NAVAID's are listed after the NAVAID name. RCO's not at NAVAID's are listed by name.

### **ALBUOUEROUE AFSS**

ALBUQUERQUE RCO 122.0 122.55

ALAMOGORDO RCO 122.15

ANTON CHICO VORTAC 117.8T 122.1R

CARLSBAD RCO 122.65

CIMARRON VORTAC 116.4T 122.1R

CLINES CORNERS RCO 122.3

CLOVIS RCO 122.5

CORONA VORTAC 115.5T 122.1R

DEMING RCO 122.2

FARMINGTON RCO 122.4

GALLUP VORTAC 115.1T 122.1R 122.6

HOBBS RC0 122.2

LAS VEGAS RCO 122.6

ROSWELL RCO 122.45

RUIDOSO RCO 122.25

SANTA FE RCO 122.2

SILVER CITY VORTAC 110.8T 122.1R

SOCORRO VORTAC 116.8T 122.1Re

TAOS VORTAC 117.6T 122.1R 122.25

TRUTH OR CONSEQUENCES RCO 122.2
TUCUMCARI RCO 122.35

ZUNI RCO 122.05

### **CEDAR CITY AFSS**

ABAJO PEAK RCO 122.55

BONNEVILLE VORTAC 112.3T 122.1R

BRYCE CANYON RCO 122.2

BULLFROG BASIN RCO 122.4

CARBON RCO 122.2

CEDAR CITY RCO 122.0 122.2 122.6

DELLE RCO 122.5

DELTA RCO 122.55

FAIRFIELD RCO 122.25 FRANCIS PEAK RCO 122.2

HALLS CROSSING RCO 122.4

HANKSVILLE RCO 122.65

LUCIN VORTAC 113.6T 122.1R

MILFORD VORTAC 112.1T 122.1R

MOAB RCO 122.3

MYTON VORTAC 112.7T 122.1R

OGDEN RCO 122.45 RICHEIELD RCO 122.5

ST GEORGE RCO 122.5

SALT LAKE CITY RCO 122.4

VERNAL RCO 122.35

### **DENVER AFSS**

AKRON RCO 120.675

ALAMOSA RCO 122.15 BADGER MOUNTAIN RCO 122.2

BLACK FOREST RCO 122.25

BLUE MESA RCO 122.55

CORTEZ RCO 122.3

DENVER RCO 122.0 122.2 122.35 123.65

DOVE CREEK RCO 122.5
DURANGO RCO 122.35

EAGLE RCO 122.2

FORT COLLINS-LOVELAND RCO 122.4

GILL RCO 122.65

GLENWOOD SPRINGS RCO 122.2

GRAND JUNCTION RCO 122.6

GRAND MESA RCO 122.2

HAYDEN RCO 122.25

KREMMLING RCO 122.3 LA JUNTA RCO 122.6

## 340 FLIGHT SERVICE STATION COMMUNICATION FREQUENCIES

LAMAR VORTAC 116.9T 122.1R LIMON RCO 122.475 MEEKER RCO 122.15 MONTROSE RCO 122.65 PUEBLO RCO 122.2 RANGELY RCO 122.65 RED TABLE MOUNTAIN RCO 122.4 RIFLE RCO 122.5 STEAMBOAT SPRINGS RCO 122.2 TELLURIDE RCO 122.15

# HAWTHORNE AFSS

BURBANK RCO 122.35 FILLMORE VORTAC 112.5T 122.1R GUADALUPE VOR 111.0T 122.1R HAWTHORNE RCO 122.0 122.2 122.5 PASO ROBLES RCO 122.4 SAN MARCUS VORTAC 114.9T 122.1R 122.3

#### OAKLAND AFSS

ARCATA RCO 122.6
CRESCENT CITY RCO 122.3
EUREKA RCO 122.35
GARBERVILLE RCO 122.3
MOUNTAIN VIEW RCO 122.5
MOUNT TAMALPAIS RCO 122.35
OAKLAND RCO 122.0 122.2 122.5 129.4 131.95
POINT ARENA RCO 122.6
SALINAS RCO 122.6
UKIAH RCO 122.35

#### PRESCOTT AFSS AJO RCO 122.65 BAGDAD RCO 122.5

BISBFF RCO 122 4

BLACK METAL PEAK RCO 122.55 BUCKEYE VORTAC 110.6T 122.1R COCHISE VORTAC 115.8T 122.1R DOUGLAS RCO 122.6 FLAGSTAFF VOR/DME 113.85T 123.65R GILA BEND VORTAC 116.6T 122.1R **GLOBE RCO 122.3** GRAND CANYON RCO 123.65 KAYENTA RCO 122.45 KINGMAN VOR/DME 108.8T 122.1R MINGUS MOUNTAIN RCO 122.3 MOUNT LEMMON RCO 122.4 NEEDLES VORTAC 115.2T 122.1R NOGALES RCO 122.4 PAGE RCO 122.6 PEACH SPRINGS RCO 122.25 PHOENIX RCO 122.2 122.6 PRESCOTT RC0 122.2 122.4 SAFFORD RCO 122.3 ST JOHNS VORTAC 112.3T 122.1R STANFIELD VORTAC 114.8T 122.1R TUBA CITY VORTAC 113.5T 122.05R **TUCSON RCO 122.2** WINSLOW RCO 122.6

## **RANCHO MURIETA AFSS**

YUMA RCO 122.2

ANGELS CAMP RCO 122.3
ANTELOPE MOUNTAIN RCO 122.4
BAKERSFIELD RCO 122.45
CHICO VOR/DME 109.8T 122.1R
EL NIDO VOR/DME 114.2T 122.1R
FALL RIVER MILLS RCO 122.4
FELLOWS VORTAC 117.5T 122.1R
FORT JONES VOR/DME 109.6T 122.1R

## FLIGHT SERVICE STATION COMMUNICATION FREQUENCIES

FRESNO RCO 122.2 122.55

GORMAN VORTAC 116.1T 122.1R

HANGTOWN VOR/DME 115.5T 122.1R

MARYSVILLE VOR/DME 110.8T 122.1R 122.6

MAXWELL VORTAC 110.0T 122.1R

MODESTO VOR/DME 114.6T 122.1R

PANOCHE VORTAC 112.6T 122.1R

QUINCY RCO 122.4

RANCHO MURIETA RCO 122.2

RED BLUFF RCO 122.4

REDDING VOR/DME 108.4T 122.1R

SACRAMENTO RCO 122.05

STOCKTON RCO 122.65

TULE PORTERVILLE VOR/DME 109.2T 122.1R

VISALIA VOR/DME 109.4T 122.1R

WEAVERVILLE RCO 122.4

### **RENO AFSS**

BEATTY VORTAC 114.7T 122.1R

COALDALE VORTAC 117.7T 122.1R

CURRANT RCO 122.3

ELKO RCO 122.6 ELY RCO 122.2

EUREKA RCO 122.3

HAZEN VORTAC 114.1T 122.1R

JACKPOT RCO 122.5

LAS VEGAS RCO 122.4

LOVELOCK RCO 122.4 MINA VORTAC 115.1T 122.1R

MORMON MESA VORTAC 114.3T 122.1R

MOUNT I FWIS RCO 122.65

MOUNT POTOSI RCO 122.35

RENO RCO 122.2 122.5

SOD HOUSE RCO 122.6

SQUAW VALLEY RCO 122.25

TONOPAH RCO 122.6 WELLS VOR 114.2T 122.1R

WILSON CREEK VORTAC 116.3T 122.1R

WINNEMUCCA RCO 122.3

### **RIVERSIDE AFSS**

BARSTOW RCO 122.3

BISHOP RCO 122.6 BLYTHE RCO 122.4

DAGGETT RCO 122.2

GOFFS VORTAC 114.4T 122.05R

FURNACE CREEK RCO 122.2

HECTOR VORTAC 112 7T 122 1R

HOMELAND VOR 113.4T 122.1R

LANCASTER RCO 122.2

MAMMOTH RCO 122.15

NEEDLES RCO 122.2

PALM SPRINGS VORTAC 115.5T 122.1R

PARKER VORTAC 117.9T 122.1R

POMONA RCO 123.65

RAND MOUNTAIN RCO 122.4

RIVERSIDE RCO 122.05 122.2

SANTA ANA RCO 122.45

THERMAL RCO 122.3

TWENTYNINE PALMS VORTAC 114.2T 122.1R

### **SAN DIEGO AFSS**

BARD VORTAC 116.8T 122.1R

IMPERIAL VORTAC 115.9T 122.1R 122.5

JULIAN RCO 123.65

OCEANSIDE VORTAC 115.3T 122.1R

SAN DIEGO RCO 122.2 122.4

YUMA RCO 122.6

## FSD0

## FLIGHT STANDARDS DISTRICT OFFICES (FSDO)

Below is a list of FSDO's in the area of coverage of this directory. These offices serve the aviation industry and the general public on matters relating to certification and operation of general aviation aircraft. Address letters to Manager, Flight Standards District Office–Federal Aviation Administration.

#### **ARIZONA**

17777 N. Perimeter Drive, Suite 101

Scottsdale, AZ 85255 Telephone: 480-419-0111

### **CALIFORNIA**

Fresno Air Terminal 4955 E. Anderson, Suite #110 Fresno, CA 93727–1573 Telephone: 559–487–5306

5001 Airport Plaza Drive, Suite #100

Long Beach, CA 90815 Telephone: 562–420–1755

2250 E. Imperial Highway, Suite #140

El Segundo, CA 90245 Telephone: 310-215-2150

1420 Harbor Bay Parkway, Suite 280

Alameda, CA 94502-7083 Telephone: 510-748-0122 Fax: 510-748-9559

6961 Flight Rd. Riverside, CA 92504 Telephone: 951–276–6701

6650 Belleau Wood Lane Sacramento, CA 95822 Telephone: 916-422-0272

8525 Gibbs Drive, Suite 120 San Diego, CA 92123 Telephone: 619–557–5281

San Francisco IFO 831 Mitten Road, Room 105 Burlingame, CA 94010–1303 Telephone: 650–876–2771

San Francisco CM0 863 Mitten Road, Building B Burlingame, CA 94010–1303 Telephone: 650–876–9013 1250 Aviation Ave., Suite 295 San Jose, CA 95110-1130 Telephone: 408-291-7681

16501 Sherman Way, Suite 330 Van Nuys, CA 91406 Telephone: 818–904–6291

### COLORADO

26805 E. 68th Avenue, Suite 200 Denver, CO 80249-6361 Telephone: 303-342-1100

#### **NFVADA**

7181 Amigo Street, Suite 180 Las Vegas, NV 89119 Telephone: 702–269–1445 Fax: 702–269–8013

4900 Energy Way Reno, NV 89502

Telephone: 775-858-7700

### **NEW MEXICO**

1601 Randolph Road SE, Suite 200N Albuquerque, NM 87106 Telephone: 505-764-1200 1-800-531-8999 (NM only) 1-800-531-1124

### **UTAH**

1020 North Flyer Way Salt Lake City, UT 84116 Telephone: 801–257–5020

# ROUTES PREFERRED IFR ROUTES

A system of preferred routes has been established to guide pilots in planning their route of flight, to minimize route changes during the operational phase of flight, and to aid in the efficient orderly management of the air traffic using federal airways. The preferred IFR routes which follow are designed to serve the needs of airspace users and to provide for a systematic flow of air traffic in the major terminal and en route flight environments. Cooperation by all pilots in filing preferred routes will result in fewer traffic delays and will better provide for efficient departure, en route and arrival air traffic service.

The following lists contain preferred IFR routes for the low altitude stratum and the high altitude stratum. The high altitude list is in two sections; the first section showing terminal to terminal routes and the second section showing single direction route segments. Also, on some high altitude routes low altitude airways are included as transition routes.

The following will explain the terms/abbreviations used in the listing:

- 1. Preferred routes beginning/ending with an airway number indicate that the airway essentially overlies the airport and flight are normally cleared directly on the airway.
- 2. Preferred IFR routes beginning/ending with a fix indicate that aircraft may be routed to/from these fixes via a Standard Instrument Departure (SID) route, radar vectors (RV), or a Standard Terminal Arrival Route (STAR).
- 3. Preferred IFR routes for major terminals selected are listed alphabetically under the name of the departure airport. Where several airports are in proximity they are listed under the principal airport and categorized as a metropolitan area; e.g., New York Metro Area.
- 4. Preferred IFR routes used in one direction only for selected segments, irrespective of point of departure or destination, are listed numerically showing the segment fixes and the direction and times effective.
  - 5. Where more than one route is listed the routes have equal priority for use.
  - 6. Official location identifiers are used in the route description for VOR/VORTAC navaids.
  - 7. Intersection names are spelled out.
- 8. Navaid and distance fixes (e.g., ARD201113) have been used in the route description in an expediency and intersection names will be assigned as soon as routine processing can be accomplished. Navaid radial (no distance stated) may be used to describe a route to intercept a specified airway (e.g., MIV MIV101 V39); another navaid radial (e.g., UIM UIM255 GSW081); or an intersection (e.g., GSW081 FITCH).
- 9. Where two navaids, an intersection and a navaid, a navaid and a navaid radial and distance point, or any navigable combination of these route descriptions follow in succession, the route is direct.
- 10. The effective times for the routes are in UTC. During periods of daylight saving time effective times will be one hour earlier than indicated. All states observe daylight saving time except Arizona, Puerto Rico and the Virgin Islands. Pilots planning flight between the terminals or route segments listed should file for the appropriate preferred IFR route.
  - 11. (90-170 incl) altitude flight level assignment in hundred of feet.
- 12. The notations "pressurized" and "unpressurized" for certain low altitude preferred routes to Kennedy Airport indicate the preferred route based on aircraft performance.

  - 14. Use current SIDs and STARSs for flight planning.
- 15. For high altitude routes, the portion of the routes contained in brackets [ ] is suggested but optional. The portion of the route outside the brackets will likely be required by the facilities involved.

### **LOW ALTITUDE**

Terminals	Route	Effective Times (UTC)
SAN FRANCISCO/OAKLAND METRO AREA From SAN FRANCISCO Area: West Bay Airports		
Los Angeles Area	(70-90-110-130-150-170) V27 VTU V299	
	SADDE V107 LAX	1400-0800
From OAKLAND Area: East Bay Airports		
Los Angeles Area	(70-90-110-130-150-170) V109 PXN V113 V485 V299 SADDE V107 LAX	1400-0800

# PREFERRED IFR ROUTES HIGH ALTITUDE

	IIIdii ALIIIODL	
		Effective Times
Terminals ALBUQUERQUE (ABQ)	Route	(UTC)
Chicago O'Hare (ORD)	J18 GCK J96 IRK BDF-STAR	1100-0400
Houston (HOU)	(Turbojets) LLO TEXNN-STAR	
ASPEN (ASE)	LLO RIICE-STAR	
Cleveland Metro Area (CLE) (CGF) (BKL)		
(LNN) (LPR)	OBK CRL HIMEZ-STAR	
BURBANK (BUR) Chicago O'Hare (ORD)	(all B747, B767, B727, DC10, DC87, L1011)	
emedge e maio (eme)	DAG LAS BCE MTU OCS J94 ONL J148 MCW JVL-STAR	0000-2359
Detroit Metro-Wayne Co (DTW)	(all other jets) DAG EED DRK J96 IRK BDF-STAR [BUR OBH] OBH J100 DBQ BAE MKG	0000-2359
bettott metto mayric oo (b1m)	POLAR-STAR	
Detroit Metro Area (PTK), (YIP), (ARB)	[BUR OBH] OBH J100 DBQ BAE MKG LAN	
(DET), (CYQG)  DENVER (DEN)	SPRTN-STAR	1100-0300
Boca Raton (BCT)	[DEN ONL] (Turbojets-GPS or DME/DME-IRU	
	equipped) RZC MEM VUZ MGM SZW PRRIE (RNAV)-STAR	
Boston (BOS)	[DEN ONL] J94 DBQ BAE J16 ALB GDM-STAR	
Chicago O'Hare (ORD) Cleveland Metro Area (CLE) (CGF) (BKL)	[DEN ONL] MCW JVL-STAR	
(LNN) (LPR)	OBK CRL HIMEZ-STAR	
Dallas/Fort Worth (DFW) Detroit Metro-Wayne Co (DTW)	J17 AMA J58 SPS UKW [DEN OBH] J100 DBQ BAE MKG POLAR-STAR	
Fort Lauderdale (FLL)	(all others) [DEN ICT] RZC VUZ MGM SZW J41 PIE FORTL-STAR	
	or (GPS or DME/DME-IRU equipped) [DEN ICT] RCZ	
5.44 (504)	VUZ MGM SZW JINGL (RNAV)-STAR	
Ft Myers (RSW)	TTT J58 HRV Q105 BLVNS Q102 BAGGS TYNEE (RNAV)-STAR	
Houston (HOU) Houston (IAH)	(Turbojets) PNH MQP ELLVR TEXNN-STAR PNH MQP RIICE-STAR	
Kennedy (JFK)	[DEN ONL] J94 OBK J584 CRL J554 JHW J70 LVZ	
	LENDY-STAR	
Miami (MIA)	(all others) [DEN ICT] RZC VUZ MGM SZW J41 PIE CYY-STAR	
	(Turbojets-GPS or DME/DME-IRU equipped) [DEN	
	ICT] ICT RZC VUZ MGM SZW SSCOT (RNAV)-STAR	
Newark (EWR)	IOW GIJ J554 CRL J584 SLT FQM-STAR	
Orlando Intl (MCO)	[DEN ICT] RZC MEM J41 PIE LALor	1100-0400
	(GPS or DME/DME-IRU equipped) ICT RZC MEM J41 PIE COSTR (RNAV)-STAR	1100-0400
Palm Beach (PBI)	[DEN ICT] (Turbojets–GPS or DME/DME–IRU	1100 0.00
	equipped) RZC MEM VUZ MGM SZW WLACE (RNAV)-STAR	
	or [DEN ICT] (Turbojets-GPS or DME/DME-IRU	
	equipped) RZC MEM VUZ MGM SZW CTY	
	WLACE (RNAV) -STAR	
Pittsburgh (PIT)	[DEN JOT] JOT J146 J34 DJB V30 ACO V337	1500 0400
Sarasota/Bradenton (SRQ)	CUTTA  DFW J58 COVIA SRQ-STAR	1500-0100
Tampa (TPA)	[DEN ICT] RZC VUZ MGM SZW DARBS-STAR	
	[DEN ICT optional] (GPS or DME/DME-IRU	
	equipped) ICT RZC VUZ MGM SZW FOXX	
	(RNAV)-STAR	

Terminals West Palm Beach (PBI)	Route [DEN ICT] (Turbojets-GPS or DME/DME-IRU equipped) RZC MEM VUZ MGM SZW WLACE	Effective Times (UTC)
	(RNAV)-STAR  or  [DEN ICT] (Turbojets-GPS or DME/DME-IRU equipped) RZC MEM VUZ MGM SZW CTY GULLO (RNAV)-STAR	
FRESNO (FAT)	OAL MAD DIA 104 EVD TOMON OTAD	4.400.0000
DenverLAS VEGAS (LAS)	OAL J148 DTA J84 EKR TOMSN-STAR	1400-0000
Chicago O'Hare (ORD)	(FL240 and above, All) BCE MTU OCS J94 ONL J94 DBQ JVL JVL-STAR	0000-2359
Cleveland Metro Area (CLE) (CGF) (BKL)		
(LNN) (LPR) Detriot/Wayne Co (DTW)	OBK CRL HIMEZ-STAR  BAE MKG POLAR-STAR  or	
	PXV VHP FWA MIZAR-STAR	
Houston (HOU)	(Turbojets) LLO TEXNN-STAR or	
Houston (IAH)	FST SAT LISSE-STARLLO RIICE-STAR	
Houston (IAH)	or	
	FST SAT GLAND-STAR	
LONG BEACH (LGB) Dallas/Fort Worth (DFW)	TRM J169 TFD J50 SSO J4 INK JEN	1400-2300
Detroit Metro-Wayne Co (DTW) Detroit Metro Area (PTK), (YIP), (ARB)	J100 DBQ BAE MKG POLAR-STAR	1400 2000
(DET), (CYQG)	J100 DBQ BAE MKG LAN SPRTN-STAR	1100-0300
Portland, OR (PDX) Seattle/Tacoma (SEA)	EHF J65 RBLEHF CZQ LIN	1300-0600 1300-0500
LOS ANGELES (LAX)	-	
Boston (BOS)	J9 MLF J107 OCS J94 DBQ BAE J16 ALB GDM-STAR	
	or	
	J9 MLF J107 DDY J158 ABR J70 GEP J106 GRB	
Chicago O'Hare (ORD)	J38 ECK J16 ALB GDM-STAR(all B747, B767, B727, DC10, DC87, L1011) DAG LAS BCE MTU OCS J94 ONL J148 MCW	
	JVL-STARor	1100-0300
Cleveland Metro Area (CLE) (CGF) (BKL)	(all other jets) TRM J78 DRK J96 IRK BDF-STAR OBK CRL HIMEZ-STAR	1100-0300
(LNN) (LPR) Detroit Metro-Wayne (DTW)	BAE MKG POLAR-STAR	
D	or PXV VHP FWA MIZAR-STAR	
Detroit Metro Area (PTK), (YIP), (ARB) (DET), (CYQG)	J100 DBQ BAE MKG LAN SPRTN-STAR	1100-0300
Houston (HOU)	FST J138 SAT LISSE-STAR	1100 0000
Houston (IAH)	FST J138 SAT GLAND-STAR	
Kennedy (JFK)	DAG J100 OBK J584 CRL J554 JHW J70 LVZ LENDY-STAR	
	J146 DVC J197 GLD J146 GIJ J554 JHW J70 LVZ	
	LENDY-STARor	0000-1400
	DAG J100 OBK J584 CRL J554 JHW J70 LVZ LENDY-STAR	1700-2359
Newark (EWR)	DAG J100 OBH J10 IOW J60 JOT J146 GIJ J554	1700-2359
Pittsburgh (PIT)	CRL J584 SLT FQM-STAR JOT J146 J34 DJB V30 ACO V337 CUTTA	and 2100-2159 1300-0100
	or J146 DVC J197 GLD J192 IOW J146 J34 DJB V30 ACO V337 CUTTA	
Portland, OR (PDX)	EHF J65 RBL	1300-0600
Seattle/Tacoma (SEA)	EHF CZQ LIN	1300-0500

Terminals MONTEREY (MRY)	Route	Effective Times (UTC)
Denver (DEN)	OAL J148 DTA J84 EKR TOMSN-STAR	1400-0000
OAKLAND (OAK)		
Chicago O'Hare (ORD)	(FL240 and above, Jets) to join ONL J94 DBQ JVL JVL-STAR	0000-2359
Denver (DEN)	J84 EKR TOMSN-STAR	1400-0000
	FMG J94 BAM J154 TCH J56 CHE TOMSN-STAR	1400-0000
Detroit Metro-Wayne Co (DTW) Detroit Metro Area (PTK), (YIP), (ARB)	SAC FMG J94 DBQ BAE MKG POLAR-STAR	
(DET), (CYQG) Houston (HOU)	SAC FMG J94 DBQ BAE MKG LAN SPRTN-STAR (Turbojets) PNH MQP ELLVR TEXNN-STAR	1400-0400
Houston (IAH) Newark (EWR)	PNH MQP RIICE-STARSAC FMG J94 OBK J584 SLT FQM-STARor	0000-2359
	FMG J94 OBK J584 CRL J584 SLT FQM-STAR	
Phoenix (PHX) ONTARIO (ONT)	OAL J92 DRK	1600-0500
Chicago O'Hare (ORD)	(FL240 and above, All DC8, B747, B767, B727,	
	DC10, L1011) DAG LAS BCE MTU OCS J94 ONL	
	J94 DBQ JVL JVL-STAR	0000-2359
	or	
	(FL240 and above, All others) TRM J78 DRK J96 IRK BDF3	0000-2359
Dallas/Fort Worth (DFW)	TRM J169 TFD J50 SSO J4 INK JEN	1400-2300
Detroit Metro-Wayne Co (DTW) Detroit Metro Area (PTK), (YIP), (ARB)	DAG OBH J100 DBQ BAE MKG POLAR-STAR	
(DET), (CYQG)	OBH J100 DBQ BAE MKG LAN SPRTN-STAR	1100-0300
Houston (HOU) Houston (IAH)	FST J138 SAT LISSE-STARFST J138 SAT GLAND-STAR	
Kennedy (JFK)	DAG J100 OBK J584 CRL J554 JHW J70 LVZ	
Pittsburgh (PIT)	LENDY-STAR	1400-2200
	DJB V30 ACO V337 CUTTA	1300-0100
Portland (PDX)	EHF J65 RBL	1300-0600
Seattle/Tacoma (SEA) Vancouver (CYVR)	EHF CZQ LINEHF CZQ LIN	1300-0500 1800-2100
		and 2330-0200
PALM SPRINGS (PSP) Chicago O'Hare (ORD)	(FL240 and above, All DC8, B747, B767, B727, DC10, L1011) join ONL J94 DBQ JVL JVL-STAR	0000-2359
	or	0000-2555
PHOENIX (PHX)	(FL240 and above, All others) join DRK J96 IRK J26 BDF V10 PLANO	
Chicago O'Hare (ORD) Cleveland Metro Area (CLE) (CGF) (BKL)	J18 SLN J96 IRK BDF-STAR	0000-2359
(LNN) (LPR)	OBK CRL HIMEZ-STAR	
Dallas/Fort Worth (DFW)	CIE J2 ELP J50 INK JEN	1400–2300
Detroit Metro-Wayne (DTW)	BAE MKG POLAR-STAR	
	PXV VHP FWA MIZAR-STAR	
Detroit Metro Area (PTK), (YIP), (ARB)	PAYSO GUP J102 ALS J13 FQF J128 DBQ BAE	
(DET), (CYQG)	MKG LAN SPRTN-STAR	1100-0300
Houston (HOU) Houston (IAH)	FST J138 SAT LISSE-STARFST J138 SAT GLAND-STAR	
Kennedy (JFK)	J18 GCK HYS PWE J192 IOW J60 JOT J146 GIJ	
	J554 JHW J70 LVZ LENDY-STARor	0000-1429
	GUP J102 ALS PUB GLD J146 GIJ J554 JHW J70 LVZ LENDY-STAR	0000-1429
	or GUP J102 ALS PUB GLD J197 OBH J100 OBK	
	J584 CRL J554 JHW J70 LVZ LENDY-STAR	1430-2359

Terminals	Route	Effective Times (UTC)
Newark (EWR)	J18 GCK HYS PWE J192 IOW J60 JOT J146 GIJ J554 CRL J584 FQM-STAR	(0.0)
	GUP J102 ALS PUB GLD J146 GIJ J554 CRL J584 FQM-STAR	0000-1459
Oakland (OAK) San Francisco (SFO)	J92 OAL ECA V195	1600-0500 1600-0500
San Jose (SJC)	J92 OAL HYP	1600-0500
Chicago O'Hare (ORD)	J32 CZI J82 FSD J16 MCW JVL-STAR MVA EKR TOMSN-STAR or	0000-2359 1400-0000
SACRAMENTO (SAC)	FMG J94 BAM J154 TCH J56 CHE TOMSN-STAR	1400-0000
Chicago O'Hare (ORD)	(FL240 and above, Jets) to join ONL J94 DBQ JVL  JVL-STAR	0000-2359
Denver (DEN)	J84 EKR TOMSN-STARor	1400-0000
Phoenix (PHX)	FMG J94 BAM J154 TCH J56 CHE TOMSN-STAR OAL J92 DRK	1400-0000
Boston (BOS)	TCH MCW J16 ECK BUF J16 ALB GDM GDM-STAR	
	or OCS J107 DDY J158 ABR J70 GEP J106 GRB J38 ECK J16 ALB GDM-STAR	
Chicago Cillara (OPP)	OCS J94 DBQ BAE J16 ALB GDM-STAR	
Chicago O'Hare (ORD)	(FL240 and above, All) OCS J94 ONL J94 DBQ JVL JVL-STAR	0000-2359
Houston (HOU) Houston (IAH) Kennedy (JFK)	(Turbojets) PNH MQP ELLVR TEXNN-STAR PNH MQP RIICE-STAR OCS J94 OBK J584 CRL J554 JHW J70 LVZ	
SAN DIEGO (SAN)	LENDY-STAR	0700–2359
Chicago O'Hare (ORD) Cleveland Metro Area (CLE) (CGF) (BKL)	IPL J18 SLN J96 IRK BDF-STAR	0000–2359
(LNN) (LPR)  Dallas/Fort Worth (DFW)  Detroit/Wayne (DFW)	OBK CRL HIMEZ-STAR IPL J18 GBN J50 SSO J4 INK JEN BAE MKG POLAR-STAR	1400-2300
	or PXV VHP FWA MIZAR-STAR	
Houston (HOU)	FST J138 SAT LISSE-STAR FST J138 SAT GLAND-STAR	
Kennedy (JFK)	IPL J18 PXR J102 ALS PUB GLD J197 OBH J100 OBK J584 CRL J554 JHW J70 LVZ	
Pittsburgh (PIT)	LENDY-STAR JOT J146 J34 DJB V30 ACO V337 CUTTA	1430-2359 1300-0100
r tessuigh (FT)	or DVC J197 GLD J192 IOW J146 J34 DJB V30 ACO	1000 0100
Portland (PDX)	V337 CUTTA EHF J65 RBL J1	1300-0600
Seattle/Tacoma (SEA)	EHF CZQ LIN J189 BTG OLM-STAR EHF CZQ LIN J189 LMT J65 SEA PAE	1300-0500
	ACORD-STAR	1800-2100 and 2330-0200
SAN FRANCISCO (SFO) Boston (BOS)	FMG J94 DBQ BAE J16 ALB GDM-STAR	
Chicago O'Hare (ORD) Cleveland Metro Area (CLE) (CGF) (BKL)	FMG J32 CZI J82 FSD J16 MCW JVL-STAR	1500-0400
(LNN) (LPR)	OBK CRL HIMEZ-STAR	1400-0000
Detroit Metro-Wayne (DTW)	or FMG J94 BAM J154 TCH J56 CHE TOMSN-STAR PXV VHP FWA MIZAR-STAR	1400-0000
	or BAE MKG POLAR-STAR	

Terminals Detroit Metro Area (PTK), (YIP), (ARB)	Route	Effective Times (UTC)
(DET), (CYQG)	SAC FMG J94 DBQ BAE MKG LAN SPRTN-STAR	1400-0400
Houston (HOU)	(Turbojets) PNH MQP ELLVR TEXNN-STAR	
Houston (IAH)	PNH MOP RIICE-STAR	
Kennedy (JFK)	FMG J94 OBK J584 CRL J554 JHW J70 LVZ	
,	LENDY-STAR	0000-2359
Newark (EWR)	FMG J94 OBK J584 SLT FQM-STAR	0000-2359
Phoenix (PHX)	OAL J92 DRK	1600-0500
Pittsburgh (PIT)	FMG J94 BFF OBH DSM IOW J60 JOT J146 J34	
	DJB V30 ACO V337 CUTTA	1300-0100
Toronto (CYYZ)	FMG J32 ABR J70 GEP J106 GRB J38 ECK	
	YWT-STAR	
SAN JOSE (SJC)		
Chicago O'Hare (ORD)	(FL240 and above, All) J32 BAM J94 DBQ JVL	
	JVL-STAR	0000-2359
Denver (DEN)	J84 EKR TOMSN-STAR	1400-0000
Houston (HOU)	(Turbojets) LLO TEXNN-STAR	
Houston (IAH)	LLO RIICE-STAR	
Phoenix (PHX)	OAL J92 DRK	1600-0500
SANTA ANA (SNA)		
Chicago O'Hare (ORD)	TRM J78 DRK J96 IRK J26 BDF V10 PLANO	
Dallas/Fort Worth (DFW)	TRM J169 TFD J50 SSO J4 INK JEN	1400-2300
Detroit Metro-Wayne Co (DTW)	TRM PKE J96 DRK FLG J10 FQF J128 DBQ BAE	
	MKG POLAR-STAR	1100-0300
Portland (PDX)	EHF J65 RBL J1 OED	1300-0600
Seattle/Tacoma (SEA)	EHF CZQ LIN J189 LMT	1300-0500
TUCSON (TUS)		
Cleveland Metro Area (CLE) (CGF) (BKL)		
(LNN) (LPR)	OBK CRL HIMEZ-STAR	
Houston (HOU)	FST J138 SAT LISSE-STAR	
Houston (IAH)	FST J138 SAT GLAND-STAR	

## SPECIAL HIGH ALTITUDE ARRIVAL ROUTES FOR DENVER TERMINAL AREA

SOUTHEAST	
Denver	over LAA QUAIL-STAR
SOUTH	
Denver	over TBE J171 TODDE QUAIL-STAR
	over ALS LARKS-STAR
	over HBU POWDR-STAR
	over HBU POWDR-STAR
SOUTHWEST	
Denver	over DVC J146 HBU POWDR-STAR
	over TBC ABOTS LARKS-STAR
	or
	over TBC J128 HBU POWDR-STAR
	over FMN LARKS-STAR
	over ALS LARKS-STAR
WEST	
Denver	over EKR TOMSN-STAR
	over TCH J56 CHE TOMSN-STAR
	over OCS J154 ALPOE RAMMS-STAR
NORTHWEST	
Denver	over MBW RAMMS-STAR
	OVEL IVIDW RAIVING-STAR
NORTH	
Denver	over BFF LANDR-STAR
NORTHEAST	
Denver	over ONL J114 SNY LANDR-STAR
	over OBH J10 LBF SAYGE-STAR
FAST	
Denver	over OBH J10 LBF SAYGE-STAR
Deliver	over GCK J154 RYLIE DANDD-STAR
	OVOI GOTT JEGT TOTALL DANDD-STAIL

1500-0300

## PREFERRED IFR ROUTES

## SPECIAL HIGH ALTITUDE ARRIVAL ROUTES FOR SALT LAKE CITY TERMINAL AREA

way Se	egment Fixes	Direction Effective	Effective Times (UTC)
HIGH ALTITUD	E—SINGLE D	IRECTION ROUTES	
Traffic departing Salt Lake City Center, westbo		of Wasatch VORTAC (TCH): AR	
Traffic departing Salt Lake City Center, westbo		atch VORTAC (TCH): IDO-STAR	
Transcon flights overflying Salt Lake City Cent Salt Lake City (ZLC)Salt Lake City (ZLC)	FMG RAIDR (RNA	atch VORTAC (TCH) or north of (TCH V)–STAR DEN GATE–STAR	ł):
Transcon flights overflying Salt Lake City Cent Salt Lake City (ZLC)	DTA TATOO DUGL DTA RUMPS OAL ILC TATOO DUGLI	th of Wasatch VORTAC (TCH):  E MADWIN-STAR  MODESTO-STAR  E MADWIN-STAR  MODESTO-STAR	
Salt Lake City (ZLC)	or FMG ILA PYE GOL or	V)-STAR            DEN GATE-STAR            V)-STAR	
Traffic overflying Salt Lake Center, westbound (MVA):		•	ina VORTAC
	or	PESTO-STAR	
Traffic overflying Salt Lake Center, westbound (MVA): Salt Lake City (ZLC)	TATOO DOUGLE N	n Rock Springs VORTAC (OCS) to M	ina VORTAC
Terminals	Route		Times (UTC)
SPECIAL HIGH	ALTITUDE DIR	RECTIONAL ROUTES	Effective
Salt Lake City	over OCS BRIGHA	AM CITY-STAR	
NORTHEAST Salt Lake City EAST	over JAC BRIGHA	M CITY-STAR	
NORTH Salt Lake City		STAR	
NORTHWEST Salt Lake City	over BYI BEARR-	STAR	
WEST Salt Lake City		AR	
Salt Lake City	over BCE DTA-TC	Н	
SOUTHEAST Salt Lake City		PR SPANE-STAR	
COUTHEACT			

## SW, 17 DEC 2009 to 11 FEB 2010

J110 ...... Farmington, NM to Boulder City, NV ...... West

Airway

350 Q-ROUTES

## **O-ROUTES REGULATORY**

## Q1, Q3, Q5, Q7, Q9 and Q11 are preferred single direction (Southbound) Q routes; flight planning Northbound not authorized.

Q routes are RNAV routes that require the use of GNSS or DME/DME/IRU RNAV, unless otherwise indicated. Please note that this section does not apply to Q routes in the Gulf of Mexico. Gulf of Mexico Q routes are explained in the Southeast and South Central A/FD volumes. Q routes listed in this A/FD volume have at least part of one of their leg segments within this volume's area of coverage.

GNSS and DME/DME/IRU RNAV operations are authorized along Q routes at FL 180 and above. GNSS and DME/DME/IRU RNAV MEAs will only be published if above FL 180.

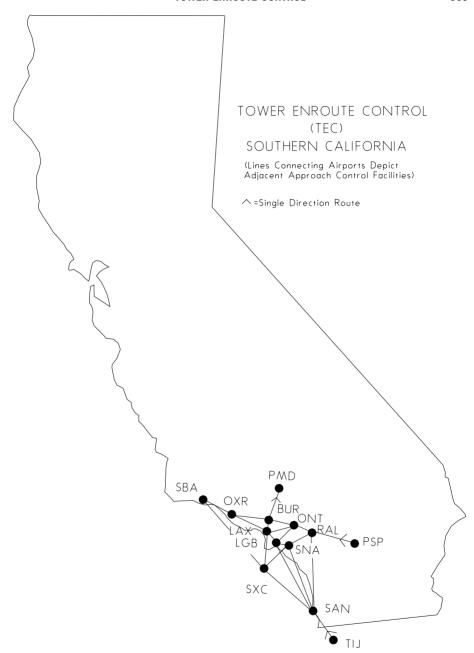
DME facilities that have been assessed for RNAV operations are listed below. Q routes with no DME facilities listed are limited to GNSS RNAV operations only. Those routes will have an enroute chart note "GNSS REQUIRED".

Route	Segment	DME
Q1	ELMAA-ERAVE	BTG, OLM, HOM, HUH, UBG
-	ERAVE-EASON	BTG, OLM, HQM, HUH, LTJ, CVO, DSD, OED, UBG, ONP, EUG
	EASON-EBINY	CVO, DSD, OED, BTG, UBG, ONP, EUG, LMT
	EBINY-ENVIE	CVO, OED, EUG, LMT, RBL, ENI, ONP, FJS
	ENVIE-ETCHY	OED, PYE, OAK, LIN, ECA, LMT, RBL, ENI, SAC, FJS
	ETCHY-POINT REYES	LIN, ECA, RBL, ENI, SAC, OAK
Q2	BOILE-HEDVI	HEC, PDZ, OCN, PMD, LAX, RZS, IPL, TRM, PKE, BLH, EED, BZA, GBN, PXR
-	HEDVI-HOBOL	BZA, GBN, BLH, EED, PXR, IPL, TFD, DRK, TUS
	HOBOL-ITUCO	TFD, GBN, BLH, PXR, TUS, CIE, SSO
	ITUCO-NEWMAN	EWM, TFD, PXR, CIE, SSO, TUS, TCS
Q3	FEPOT-FAMUK	OLM, TOU, HQM, CVO, BTG, DSD, LTJ, UBG, ONP, EUG
-	FAMUK-FRFLY	BTG, DSD, OED, CVO, EUG, ONP, UBG, RBL, LMT
	FRFLY-FINER	OED, EUG, RBL, LMT, ENI, CVO, FJS
	FINER-FOWND	OED, PYE, ECA, LIN, OAK, ENI, RBL, LMT, SAC, FJS
	FOWND-POINT REYES	LIN, ECA, PYE, RBL, SAC, ENI
Q4	BOILE-HEDVI	HEC, PDZ, OCN, PMD, LAX, RZS, IPL, TRM, PKE, BLH, EED, BZA, GBN, PXR
-	HEDVI-SCOLE	EED, BLH, BZA, GBN, TRM, IPL, TFD
	SCOLE-SPTFR	EED, BLH, BZA, GBN, TRM, IPL, TFD
	SPTFR-ZEBOL	EED, IPL, BZA, GBN, TFD, PXR, BLH
	ZEBOL-SKTTR	PXR, BLH, BZA, GBN, TFD, TUS, SSO, CIE, SVC, TCS
	SKTTR-EL PASO	EWM, CUS, SVC, TCS, SSO, CIE, ELP, DMN, CME
Q5	HAROB-HISKU	OLM, ONP, CVO, EUG, HQM, UBG, BTG, LTJ, DSD, HUH
	HISKU-HARPR	ONP, CVO, EUG, LTJ, DSD, UBG, BTG, RBL, OED, LMT, FJS, LKV
	HARPR-HOMEG	CVO, EUG, OED, RBL, LMT, ENI, FJS, LKV
	HOMEG-HUPTU	SAC, PYE, LIN, OAK, ECA, LMT, RBL, ENI, OED, FJS
	HUPTU-STIKM	OAK, ECA, PYE, LIN, SAC, ENI, RBL
Q7	JINMO-JOGEN	CVO, HQM, LTJ, UBG, BTG, ONP, IMB, EUG, OLM, DSD, YKM, PDT, SEA
	JOGEN-JUNEJ	LTJ, IMB, UBG, EUG, CVO, RBL, LMT, FMG, DSD, LKV, OED, BTG
	JUNEJ-JAGWA	RBL, LMT, FMG, LIN, SAC, ECA, ENI, MOD, SWR, OAK, LKV, CZQ, AVE, SNS
	JAGWA-AVENAL	OAK, MOD, ECA, EHF, PRB, AVE, SNS, CZQ
Q9	SUMMA-SMIGE	OLM, UBG, SEA, YKM, BTG, ONP, IMB, HQM, PDT, EUG, LTJ, CVO, DSD, OED,
		EPH, MWH
	SMIGE-SUNBE	IMB, UBG, EUG, IMB, RBL, LMT, FMG, SAC, OED, CVO, LKV, DSD, BTG
	SUNBE-REBRG	RBL, LMT, FMG, SAC, ECA, MVA, CZQ, OAK, EHF, PMD, LKV, LIN, MOD, AVE, OED,
		SWR
	REBRG-DERBB	CZQ, PMD, EHF, LAX, RZS, AVE, MOD, ECA
Q11	PAAGE-PAWLI	EPH, UBG, CVO, EUG, HQM, YKM, OLM, PDT, BTG, ONP, IMB, LTJ, DSD, LKV,
		OED, SEA
	PAWLI-PITVE	EUG, FMG, SAC, IMB, LKV, OED, DSD, RBL, LMT, CVO, REO
	PITVE-PUSHH	FMG, SAC, LIN, SWR, MOD, OAL, RBL, LKV, LMT, MVA, CZQ
	PUSHH-LOS ANGELES	SAC, ECA, FMG, LIN, OAL, MOD, EHF, LAX, PMD, PDZ, HEC, OCN, CZQ, AVE, RZS
Q13	All segments	None; GNSS required
Q15	All segments	None; GNSS required
Q19	PLESS-NASHVILLE	ENL, GQO, PXV, BNA, IIU, FAM, BWG, CSX
Q20	CORONA-HONDS	CNX, ABQ, ACH, ONM, TXO, LVS, TCC, CME
	HONDS-UNNOS	CNX, INK, CME, TXO, TCC
	UNNOS-FUSCO	FST, ACH, INK, CME, SJT, TXO, TCC
021	FUSCO-JUNCTION	ABI, CWK, CSI, INK, LZZ, JCT, SJT, STV, FST
Q21	JONEZ-RAZORBACK	BYP, EOS, TUL, TXK, ADM, RZC, OKM
Q22	GUSTI-OYSTY	AEX, DAS, MCB, LLA, BTR, LCH, HRV, LFT, LEV
	OYSTY-ACMES	RQR, GCV, MCB, BTR, PCU, GPT, HRV, LEV, SJI
022	ACMES-CATLN	SJI, MGM, MCB, BFM, GPT, GCV, HRV, CEW, MVC, PCU, MEI
Q23	FORT SMITH-RAZORBACK	UNIVI, NZO, LOG, TOL

Route	Segment	DME
Q24	LAKE CHARLES-BATON ROUGE	AEX, DAS, LCH, MCB, LFT, BTR
	BATON ROUGE-IRUBE	AEX, LEV, MCB, LCH, RQR, HRV, BTR, GCV, MCB, PCU, SJI, LBY
	IRUBE-PAYTN	GCV, MCB, JYU, PCU, MEI, HRV, CEW, SJI
Q25	MEEOW-WALNUT RIDGE	ELD, MEM, LIT, FAM, RZC
	WALNUT RIDGE-WLSUN	MEM, STL, BWG, PXV, ENL, FAM, ARG, BNA, CSX, TTH BWG, PXV, ENL, BNA, TTH
026	WLSUN-POCKET CITY WALNUT RIDGE-DEVAC	LIT, JKS,GQO, MEM, BNA, FAM, ARG, DYR, VUZ, RMG
Q27	FORT SMITH-ZALDA	OKM, SGF, RZC, EOS, TUL
Q28	GRAZN-PYRMD	EIC, LIT, ELD, OKM, TXK
	PYRMD-HAKAT	ARG, LIT, FAM, ELD, SGF, RZC, MEM, TXK
	HAKAT-ESTEE	ARG, LIT, FAM, SGF, MEM
Q29	ESTEE-POCKET CITY HARES-MEMPHIS	ARG, CSX, FAM, PXV, ENL, MEM, STL, BWG, TTH, BNA MEM, ARG, LIT, JAN, ELD, SQS
Q23	MEMPHIS-SIDAE	MEM, PXV, BNA, BWG, ARG, ENL
	SIDAE-POCKET CITY	PXV, TTH, BWG, ENL
Q30	SIDON-VULCAN	GLH, MEM, VUZ, JAN, JYU, MEI, MGM, SQS, RMG
Q31	DHART-JODOX	SQS, LIT, TXK
	JODOX-MARVELL	SQS, LIT, ELD, MEM, ARG
	MARVELL-TIIDE TIIDE-POCKET CITY	ARG, BWG, PXV, FAM, LIT, MEM, ENL, TTH BWG, PXV, ENL, TTH
Q32	EL DORADO-GAGLE	AEX, JAN, MEM, SQS, SWB, ELD, LIT, TXK
	GAGLE-CRAMM	JAN, SQS, MEM, ARG, VUZ, BNA, LIT
	CRAMM-NASHVILLE	BWG, MEM, VUZ, BNA, GQO
	NASHVILLE-SWAPP	BWG, IIU, PXV, VXV, BNA, GQO
Q33	DHART-LITTLE ROCK	AEX, ELD, LIT, TXK, SWB, ARG, MEM, SQS
Q34	LITTLE ROCK-PROWL TEXARKANA-MATIE	ELD, SGF, FAM, LIT, ARG, MEM, RZC, CSX, STL LIT, SWB, TXK, BYP, EIC, ELD, SQS
QU-T	MATIE-MEMPHIS	LIT, ARG, MEM, ELD, SQS
	MEMPHIS-SWAPP	BWG, ARG, MEM, MKL, SQS,PXV, BNA, GQO, IIU, VXV
Q35	KIMBERLY-NEERO	LTJ, PDT, DSD, IMB, LKV, BOI, REO, BAM, SDO
	NEERO-WINEN	BQU, SDO, BAM, REO, BVL, ILC, DTA, ELY, CDC, MLF, BCE
	WINEN-CORKR	CDC, BCE, BLD, ILC, MLF, TBC, PGS, INW, DRK
Q36	CORKR-DRAKE RAZORBACK-TWITS	TBC, BCE, BLD, DRK, PGS, FLG, GCN, INW, TFD RZC, MEM, SGF, BUM, TUL, EOS, FAM, ARG, LIT
ą.	TWITS-DEPEC	MEM, GQO, BNA, BWG, FAM, ARG, PXV, IIU
	DEPEC-NASHVILLE	GQO, BWG, BNA, PXV, IIU
	NASHVILLE-SWAPP	VXV, BWG, BNA, GQO, PXV, IIU
Q38	ROKIT-INCIN	DAS, LCH, SWB, IAH, LFK, HUB, AEX
	INCIN-LAREY LAREY-BESOM	JAN, MCB, SWB, AEX JAN, JYU, MEI, SQS, VUZ
040	ALEXANDRIA-DOOMS	AEX, SWB, LCH, JAN, HEZ, MCB
•	DOOMS-WINAP	JAN, SQS, MEI, MCB
	WINAP-MISLE	MEI, VUZ, JYU
Q42	KIRKSVILLE-STRUK	CID, IOW, UIN, LMN, IRK, BDF, STL, DEC, ENL, CSX
	STRUK-DANVILLE	ENL, IOW, UIN, BDF, DEC, STL, CSX, SPI, TTH, BVT, JOT, VHP, OXI, ENL, OKK, OBK, GIJ, FWA, GSH, IRK
	DANVILLE-MUNCIE	GIJ, SPI, BDF, OBK, OKK, VHP, BVT, DEC, GSH, FWA, JOT, TTH, OXI, ROD, FLM
	MUNCIE-HIDON	FLM, VHP, GSH, TTH, GIJ, OKK, FWA, ROD, OXI, CRL, GSH, APE, DJB, DXO, HNN,
		AIR, HVQ, CXR, EWC
	HIDON-BUBAA	AIR, APE, HNN, CXR, HVQ, EWC, DJB
	BUBAA-PSYKO	AIR, APE, DJB, CXR, HNN, EWC, SLT, CSN, JHW, ETG, PSB
	PSYKO-BRNAN BRNAN-MAALS	PSB, JHW, EWC, AIR, ETG, CSN, EMI, SLT EMI, SLT, CSN, EWC, PSB, ETG, SAX, RBV, HNK, HUO, SIE
	MAALS-SUZIE	ETG, EMI, CSN, HUO, SIE, JFK, PSB, SLT, HNK
	SUZIE-EAST TEXAS	JFK, EMI, PSB, SLT, HNK, SIE, RBV, SAX, HUO, CYN
	EAST TEXAS-ELIOT	HUO, RBV, EMI, CYN, SAX, JFK, PSB, HNK
Q104	DEFUN-HEVVN	PIE, PZD, CRG, SZW, TAY, JYU, CEW, MGM, OTK, CRG
	HEVVN-PLYER	PIE, ORL, OMN, SRQ, TAY, LAL, CRG, SZW, PZD
	PLYER-SWABE SWABE-ST PETERSBURG	PIE, ORL, OMN, SRQ, TAY LAL, ORL, OMN, SRQ, PHK, PIE
	ST PETERSBURG-	PHK, PBI, SRQ, PIE, VRB, ORL, FLL, LAL, OMN
	CYPRESS	

352 Q-ROUTES

Route	Segment	DME
Q106	SMELZ-BULZI	LAL, ORL, OMN, PHK, PIE, CRG, VRB, TAY, OTK, PZD, AMG, SZW
	BULZI-DRABK	AMG, PZD, TAY, CRG, SZW, MGM, OTK, JYU, CEW, SJI
	DRABK-GADAY	MGM, PZD, OTK, JYU, SZW, CEW, SJI
Q108	GADAY-CLAWZ	MGM, SJI, CEW, JYU, PZD, OTK, MCN, SZW, LGC, TAY, AMG
Q110	THNDR-JAYMC	SRQ, VRB, PIE, LAL, VKZ, ORL, PBI
	JAYMC-RVERO	VKZ, VRB, PHK, PIE, LAL, SRQ, ORL, OMN, PBI, DHP
	RVERO-KPASA	OMN, PIE, PBI, SRQ, ORL, LAL
	KPASA-BRUTS	SRQ, VRB, ORL, PHK, TAY, PIE, OMN, OTK, LAL, CRG, SZW, AMG
	BRUTS-GULFR	OMN, AMG, CRG, SZW, PIE, TAY, PZD, OTK
	GULFR-FEONA	TAY, MCN, PZD, CRG, OTK, SZW, AMG, MCN, ATL, MGM
Q112	DEFUN-HEVVN	PIE, OTK, CRG, OMN, LAL, SZW, SRQ, ORL, VRB
	HEVVN-INPIN	JYU, PZD, CEW, SZW, MGM, OTK, TAY, AMG, PIE, CRG
Q116	KPASA-BRUTS	SRQ, VRB, ORL, PHK, TAY, PIE, OMN, OTK, LAL, CRG, SZW, AMG
	BRUTS-GULFR	OMN, AMG, CRG, TAY, LAL, PZD, SZW, OTK
	GULFR-CEEYA	MCN, AMG, PZD, OTK, SZW, TAY
Q118	KPASA-BRUTS	SRQ, VRB, ORL, PHK, TAY, PIE, OMN, OTK, LAL, CRG, SZW, AMG
	BRUTS-LENIE	OMN, AMG, CRG, TAY, LAL, PZD, SZW, OTK, MCN
Q501	VIXIS-GOPHER	ECK, FNT, APN, SSM, GRR, MBL, SAW, BAE, MNM, DLL, AUW, ODI, STE, FGT, EAU,
		DLH, GEP, BRD, MCW, MSP, ASP, TVC, GRB, RWF
	GOPHER-SOBME	FGT, BRD, MCW, GEP, ABR, FAR, DLH, ODI, RWF, FSD
Q502	KENPA-GOPHER	SSM, FNT, ECK, APN, SAW, GRB, BAE, DLL, AUW, ODI, FGT, DLH, EAU, MCW,
		MSP, MNM, ASP, TVC, GEP, RWF, BRD
	GOPHER-SOBME	FGT, DLH, ODI, MCW, ABR, FAR, MSP, GEP, RWF, FSD, BRD
Q504	NOTAP-CESNA	SSM, ECK, APN, GLR, PLN, ISQ, MNM, DLL, RHI, DLH, GEP, FGT, ODI, ASP, TVC,
		SAW, GRB, BRD
	CESNA-HEMDI	ODI, GEP, DLH, FGT, RWF, FAR, AXN, FSD, ABR, DLL, BRD
Q505	OMAGA-RIMBE	SSM, TVC, ASP, SAW, GRB
	RIMBE-CESNA	SSM, RHI, DLL, DLH, GEP, FGT, TVC, SAW, GRB, BRD, ODI
	CESNA-HEMDI	GEP, DLH, FGT, RWF, FAR, AXN, FSD, ABR, BRD, ODI, GRB



# TOWER ENROUTE CONTROL (TEC)

Within the national airspace system it is possible for a pilot to fly IFR from one point to another without leaving approach control airspace. This is referred to as "Tower Enroute" which allows flight beneath the enroute structure. The tower enroute concept has been expanded (where practical) by reallocating airspace vertically/geographically to allow flight planning between city pairs while remaining within approach control airspace. Pilots are encouraged to use the TEC route descriptions provided in the Southwest U.S. Airport/Facility Directory when filing flight plans. Other airways which appear to be more direct between two points may take the aircraft out of approach control airspace thereby resulting in additional delays or other complications. All published TEC routes are designed to avoid enroute airspace and the majority are within radar coverage. The following items should be noted before using the graphics and route descriptions.

- 1. The graphic is not to be used for navigation nor detailed flight planning. Not all city pairs are depicted. It is intended to show geographic areas connected by tower enroute control. Pilots should refer to route descriptions for specific flight planning.
- 2. The route description contains four columns of information after geographic area listed in the heading, where the departure airport is located; i.e., the airport/airports of intended landing using FAA three letter/letter-two number identifiers, the coded route number (this should be used when filing the flight plan and will be used by ATC in lieu of reading out the full route description), the specific route (airway, radial, etc.), the altitude allowed for type of aircraft and the routes.
- 3. The word "DIRECT" will appear as the route when radar vectors will be used or no airway exists. Also this indicates that a Standard Instrument Departure (SID) or Standard Terminal Arrival (STAR) may be applied by ATC.
- 4. When a NAVAID or intersection identifier appears with no airway immediately preceding or following the identifier, the routing is understood to be DIRECT to or from that point unless otherwise cleared by ATC or radials are listed (See item 5).
- 5. Routes beginning and ending with an airway indicate that the airway essentially overflies the airport or radar vectors will be applied.
- 6. Where more than one route is listed to the same destination, ensure you file correct route for type of aircraft which is denoted after the route in the altitude column using J,M,P, or Q. These are listed after item 10 under Aircraft Classification.
- 7. Although all airports are not listed under the destination column, IFR flight may be planned to satellite airports in the proximity of major airports via the same routing.
- 8. Los Angeles International Airport (LAX) and four other airports (ONT–SAN–TOA–SNA) have two options due to winds and these affect the traffic flows and runways in use. To indicate the difference the following symbols are used after the airport: Runway Number, W for west indicating normal conditions, E for East, and N for North indicating other than normal operation. If nothing follows the airport use this route on either West, East, or North plan. Other destinations have different arrivals due to LAX being East and they have the notation "(LAXE)." Torrance Airport is also unique in that the airport is shared between Los Angeles and Coast area of Southern California TRACON; for Runway 11 departures use Coast area routings and for Runway 29 departures use Los Angeles area routings.
- 9. When filing flight plans, the coded route identifier, i.e. SANL2, VTUL4, POML3 may be used in lieu of the route of flight.
- 10. Aircraft types i.e. J, M, P, and Q are listed at the beginning of the altitude and should be used with the route of flight filed. (See Aircraft Classification below). The altitudes shown are to be used for the route. This allows for separation of various arrival routes, departure routes, and overflights to, from, and over all airports in the Southern California area.

## **LEGENDS**

### AIRCRAFT CLASSIFICATION

- (J) = Jet powered
- (M) = Turbo Props/Special (cruise speed 190 knots or greater)
- (P) = Non-jet (cruise speed 190 knots or greater)
- (Q) = Non-jet (cruise speed 189 knots or less)

ROUTE ID BURN1 BURN2 BURN2 BURN3 BURN4 BURN5 BURN6 BURN7	ROUTE V186 ADAMM V394 HHR RY25 LOC V186 V264 POM V394 HHR RY25 LOC VNY095R ELMOO VNY095R PURMS VNY SMO VNY095R DARTS	PQ50 JM70 JMPQ50 JMPQ50 JMPQ50
BURN2 BURN3 BURN4 BURN5 BURN6 BURN7	V186 V264 POM V394 HHR RY25 LOC VNY095R ELMO0 VNY095R PURMS VNY SMO VNY095R DARTS	JM70 JMPQ50
BURN3 BURN4 BURN5 BURN6 BURN7	VNY095R ELMO0 VNY095R PURMS VNY SMO VNY095R DARTS	JMPQ50
BURN4 BURN5 BURN6 BURN7	VNY095R PURMS VNY SMO VNY095R DARTS	-
BURN5 BURN6 BURN7	VNY SMOVNY095R DARTS	JMPQ50
BURN6 BURN7	VNY095R DARTS	
BURN7		JM50PQ
		JMPQ50
	V186 V264 POM	JM70PQ
BURN8	V186 PDZ	PQ50
BURN9	V186 V264 POM V197 PDZ	JM70
		PQ50
		1 Q30
DUKINII	WESIN	JM70
BURN12	V186 PDZ PDZ078R EDITS	PQ50
DOMNIES		11.470
		JM70
BURN14		PQ50
BURN15	V186 V264 POM V197 PDZ V186	
	NIKKL	JM70
BURN16		
20111110		DOEO
DUDNIG 7		PQ50
		JM90
BURN18	V186 BAYJY V363 DANAH SXC065R	
	SXC	JM50
BURN19	V186 ADAMM V394 SLI	PQ50
		PQ50
		JM90
		JM50
BURN23	V186 BAYJY V363 POXKU V8 SLI	JM50
BURN24	V186 ADAMM V394 SLI	M50
BURN25	V186 BAYJY V363 DANAH V23 SLI	J70
BURN26	V186 ROBNN V458 OCN	PQ70
BURN27	TWINE V518 KIMMO V459 SLI V23	-
	OCN	JM90
BURN28	V186 BAYJY V363 DANAH V23 OCN	JM70
BURN29	V186 HAILE V66 MZB	PQ90
BURN30A	TWINE V518 KIMMO V459 SLI V23	
		M90
DUDNIOOD		IVISO
BURNSUB		
	LAX118 CARDI MZB320 MZB	J110
BURN31	V186 BAYJY V363 DANAH V23 KELPS	
		J110M9
BURN32	V186 BAYJY V363 DANAH V165 SARGS.	PQ50
BURN33	TWINE V518 KIMMO V459 SLI V165	
	SARGS	J110M9
BURN34	V186 POM164R V25 REDIN V165	
		JM70
DUDNOS		
		PQ70
BURN36		
	V208 JLI	JM90
BURN37	V186 BAYJY V363 DANAH V23 OCN	
	V208 II I	JM70
DIIDNISO	FIM	
BURN38		JMPQ40
	FIM V186 DEANO V27 KWANG	JMPQ60
BURN39		
RNKN38		
RUKN39		
	ROUTE	ALTITUDF
ROUTE ID		ALTITUDE
	SLI V23 POPPR SM0125R SM0	
ROUTE ID CSTN1	SLI V23 POPPR SM0125R SM0 SM0311R SILEX	PQ40
ROUTE ID CSTN1	SLI V23 POPPR SM0125R SM0 SM0311R SILEX SLI V23 LAX LAX316R SILEX	
ROUTE ID CSTN1	SLI V23 POPPR SM0125R SM0 SM0311R SILEX	PQ40
ROUTE ID CSTN1	SLI V23 POPPR SM0125R SM0 SM0311R SILEX SLI V23 LAX LAX316R SILEX SLI V23 POPPR SM0125R SM0	PQ40 JM60
ROUTE ID CSTN1 CSTN2 CSTN3	SLI V23 POPPR SM0125R SM0 SM0311R SILEX	PQ40 JM60 PQ40
ROUTE ID CSTN1	SLI V23 POPPR SM0125R SM0 SM0311R SILEX SLI V23 LAX LAX316R SILEX SLI V23 POPPR SM0125R SM0	PQ40 JM60
	BURN16  BURN17 BURN18  BURN19 BURN20 BURN21 BURN22 BURN23 BURN23 BURN24 BURN25 BURN26 BURN27  BURN28 BURN27  BURN28 BURN29 BURN30A  BURN30B  BURN31  BURN31	BURN10         V186 PDZ V186 WESIN

## TOWER ENROUTE CONTROL

LAX	CSTN7	SLI	JM70PQ40
LAX (LAXE)	CSTN8	SLI V8 TANDY	JM50PQ40
TO:	ROUTE ID	ROUTE	ALTITUDE
SM0	CSTN9	SLI V23 POPPR SM0125R SM0	50.40
0140	007140	SM0059R ELM00	PQ40
SMO	CSTN10	SLI V459 DARTS	JM80
SMO (LAXE)	CSTN11	SLI SLI333R V186 DARTS	JMPQ60
CCB EMT POC CNO REI L65 AJO ONT RAL RIR RIV SBD	CSTN12	SLI V8 POXKU V363 POM SLI V8 PDZ	JMPQ50
HMT	CSTN13 CSTN14	SLI V8 PDZ V186 WESIN	JM60PQ50
L67	CSTN14 CSTN15	SLI V8 PDZ V100 WESINSLI V8 PDZ PDZ078R EDITS	JM60PQ50 JM60PQ50
F70	CSTN15	SLI V8 PDZ V186 NIKKL	JM60PQ50
CRO NFG NKX OKB	CSTN17	V25 PACIF V208 OCN	JM70
RNM	CSTN18	V25 PACIF V208 JLI	JM70
MYF NRS NZY SAN SDM SEE	CSTN19	V25 PACIF V208 LAX118R CARDI	
		MZB320R MZB	J110M90
SAN (SANE)	CSTN20	V25 REDIN V165 SARGS	J110M90
SBA	CSTN21	SLI V23 LAX V299 VTU VTU282R	
		KWANG	PQ60
SBA (LAXE)	CSTN22	SLI SLI333R V186 DEANO V27 KWANG	MPQ60
SBA (LAXE)	CSTN23	SXC V208 VTU VTU282R KWANG	J100
NTD OXR CMA	CSTN24	SLI V23 POPPR SM0125R SM0 VNY	PQ40
NTD CMA OXR (LAXE)	CSTN25	SLI SLI333R V186 FIM	MPQ60
			-
FROM: LGB			
TO:	ROUTE ID	ROUTE	ALTITUDE
SBA	CSTN26	LAX V299 VTU VTU282R KWANG	J100M80
NTD OXR CMA	CSTN27	SLI V23 LAX VNY	JM60
FROM: FUL SLI SNA TOA (RWY11)			
TO:	ROUTE ID	ROUTE	ALTITUDE
SBA	CSTN28	SXC V208 VTU VTU282R KWANG	J100M80
NTD OXR CMA	CSTN29A	SLI V23 LAX YNY	M60
NTO OXR CMA	CSTN29B	SXC V208 VTU	J80
FROM: SNA			
	DOUTE IN	DOUTE	AI TITIIDE
TO:	ROUTE ID	ROUTE V23 OCN	ALTITUDE POSO
TO: CRQ NFG NKX OKB	CSTN30	V23 OCN	PQ50
TO: CRQ NFG NKX OKB MYF NRS NZY SAN SDM SEE	CSTN30 CSTN31	V23 OCNV23 MZB	PQ50 PQ50
T0: CRQ NFG NKX OKB MYF NRS NZY SAN SDM SEE RNM	CSTN30 CSTN31 CSTN32	V23 OCNV23 MZBV23 OCN V208 JLI	PQ50 PQ50 PQ70
TO: CRQ NFG NKX OKB MYF NRS NZY SAN SDM SEE	CSTN30 CSTN31	V23 OCNV23 MZB	PQ50 PQ50
T0: CRQ NFG NKX OKB MYF NRS NZY SAN SDM SEE RNM	CSTN30 CSTN31 CSTN32	V23 OCNV23 MZBV23 OCN V208 JLI	PQ50 PQ50 PQ70
T0: CRQ NFG NKX OKB MYF NRS NZY SAN SDM SEE RNM SAN (SANE)	CSTN30 CSTN31 CSTN32	V23 OCNV23 MZBV23 OCN V208 JLI	PQ50 PQ50 PQ70
TO: CRQ NFG NKX OKB	CSTN30 CSTN31 CSTN32	V23 OCNV23 MZBV23 OCN V208 JLI	PQ50 PQ50 PQ70
TO: CRQ NFG NKX OKB	CSTN30 CSTN31 CSTN32 CSTN33	V23 OCN V23 MZB V23 OCN V208 JLI V23 OCN V165 SARGS	PQ50 PQ50 PQ70 PQ50
T0: CRQ NFG NKX OKB	CSTN30 CSTN31 CSTN32 CSTN33	V23 OCN	PQ50 PQ50 PQ70 PQ50
T0: CRQ NFG NKX OKB	CSTN30 CSTN31 CSTN32 CSTN33  ROUTE ID CSTN34	V23 OCN	PQ50 PQ50 PQ70 PQ50
T0: CRQ NFG NKX OKB	CSTN30 CSTN31 CSTN32 CSTN33  ROUTE ID CSTN34	V23 OCN	PQ50 PQ50 PQ70 PQ50 ALTITUDE PQ50
TO: CRQ NFG NKX OKB	CSTN30 CSTN31 CSTN32 CSTN33  ROUTE ID CSTN34 CSTN35	V23 OCN	PQ50 PQ50 PQ70 PQ50 ALTITUDE PQ50
T0: CRQ NFG NKX OKB	CSTN30 CSTN31 CSTN32 CSTN33  ROUTE ID CSTN34 CSTN35 CSTN36	V23 OCN	PQ50 PQ50 PQ70 PQ50 ALTITUDE PQ50 PQ70 PQ50
T0: CRQ NFG NKX OKB	CSTN30 CSTN31 CSTN32 CSTN33  ROUTE ID CSTN34 CSTN35 CSTN36	V23 OCN	PQ50 PQ50 PQ70 PQ50 ALTITUDE PQ50 PQ70 PQ50
T0: CRQ NFG NKX OKB	CSTN30 CSTN31 CSTN32 CSTN33 ROUTE ID CSTN34 CSTN35 CSTN36 CSTN37	V23 OCN	PQ50 PQ50 PQ70 PQ50 PQ50 ALTITUDE PQ50 PQ70 PQ50 PQ50
T0: CRQ NFG NKX OKB	CSTN30 CSTN31 CSTN32 CSTN33  ROUTE ID CSTN34 CSTN35  CSTN36 CSTN37	V23 OCN	PQ50 PQ50 PQ50 PQ50 PQ50 ALTITUDE PQ50 PQ50 PQ50 PQ50
T0: CRQ NFG NKX OKB	CSTN30 CSTN31 CSTN32 CSTN33  ROUTE ID CSTN34 CSTN35 CSTN36 CSTN37	V23 OCN	PQ50 PQ50 PQ50 PQ50 PQ50 ALTITUDE PQ50 PQ50 PQ50 PQ50
T0: CRQ NFG NKX OKB	CSTN30 CSTN31 CSTN32 CSTN33  ROUTE ID CSTN34 CSTN35 CSTN36 CSTN37  ROUTE ID CSTN37	V23 OCN	PQ50 PQ50 PQ50 PQ50 PQ50 ALTITUDE PQ50 PQ50 PQ50 PQ50 PQ50 PQ50 PQ50
T0: CRQ NFG NKX OKB	CSTN30 CSTN31 CSTN32 CSTN33  ROUTE ID CSTN34 CSTN35  CSTN36 CSTN37  ROUTE ID CSTN37	V23 OCN	PQ50 PQ50 PQ70 PQ50 PQ50 ALTITUDE PQ50 PQ50 PQ50 PQ50 PQ50 PQ50 PQ50 PQ50
T0: CRQ NFG NKX OKB	CSTN30 CSTN31 CSTN32 CSTN33  ROUTE ID CSTN34 CSTN35 CSTN36 CSTN37  ROUTE ID CSTN37	V23 OCN	PQ50 PQ50 PQ50 PQ50 PQ50 ALTITUDE PQ50 PQ50 PQ50 PQ50 PQ50 PQ50 PQ50
T0: CRQ NFG NKX OKB	CSTN30 CSTN31 CSTN32 CSTN33  ROUTE ID CSTN34 CSTN35  CSTN36 CSTN37  ROUTE ID CSTN37	V23 OCN	PQ50 PQ50 PQ70 PQ50 PQ50 ALTITUDE PQ50 PQ50 PQ50 PQ50 PQ50 PQ50 PQ50 PQ50
TO: CRQ NFG NKX OKB	CSTN30 CSTN31 CSTN32 CSTN32 ROUTE ID CSTN34 CSTN35 CSTN36 CSTN37  ROUTE ID CSTN37	V23 OCN	PQ50 PQ50 PQ50 PQ50 PQ50 ALTITUDE PQ50 PQ50 PQ50 PQ50 PQ50 PQ50 PQ50 PQ50
T0: CRQ NFG NKX OKB	CSTN30 CSTN31 CSTN32 CSTN33  ROUTE ID CSTN34 CSTN35  CSTN36 CSTN37  ROUTE ID CSTN38 CSTN39 CSTN39 CSTN40 CSTN41  ROUTE ID	V23 OCN	PQ50 PQ50 PQ70 PQ50 PQ50 ALTITUDE PQ50 PQ50 PQ50 PQ50 PQ50 PQ50 PQ50 PQ50
TO: CRQ NFG NKX OKB	CSTN30 CSTN31 CSTN32 CSTN32 ROUTE ID CSTN34 CSTN35 CSTN36 CSTN37  ROUTE ID CSTN37	V23 OCN	PQ50 PQ50 PQ50 PQ50 PQ50  ALTITUDE PQ50 PQ50 PQ50  ALTITUDE PQ50 PQ50 PQ50 PQ50 PQ50 PQ50 PQ50
TO: CRQ NFG NKX OKB	CSTN30 CSTN31 CSTN32 CSTN32 ROUTE ID CSTN34 CSTN35 CSTN36 CSTN37  ROUTE ID CSTN38 CSTN39 CSTN40 CSTN40 CSTN41  ROUTE ID CSTN41	V23 OCN	PQ50 PQ50 PQ50 PQ50 PQ50  ALTITUDE PQ50 PQ50 PQ50  ALTITUDE PQ50 PQ50 PQ50 PQ50 PQ50 PQ50 PQ50 PQ50
T0: CRQ NFG NKX OKB	CSTN30 CSTN31 CSTN31 CSTN32 CSTN32 ROUTE ID CSTN34 CSTN35 CSTN36 CSTN37  ROUTE ID CSTN38 CSTN39 CSTN40 CSTN40 CSTN41  ROUTE ID CSTN41  CSTN42 CSTN42	V23 OCN	PQ50 PQ50 PQ50 PQ50 PQ50  ALTITUDE PQ50 PQ50  ALTITUDE PQ50 PQ50 PQ50 PQ50 PQ50 PQ50 PQ40 PQ40 PQ40
T0: CRQ NFG NKX OKB	CSTN30 CSTN31 CSTN32 CSTN33  ROUTE ID CSTN34 CSTN35  CSTN36 CSTN37  ROUTE ID CSTN38 CSTN39 CSTN40 CSTN41  ROUTE ID CSTN41  ROUTE ID CSTN41	V23 OCN	PQ50 PQ50 PQ50 PQ50 PQ50  ALTITUDE PQ50 PQ50 PQ50  ALTITUDE PQ50 PQ50 PQ50 PQ50 PQ50 PQ50 PQ50 PQ50
T0: CRQ NFG NKX OKB	CSTN30 CSTN31 CSTN31 CSTN32 CSTN32 ROUTE ID CSTN34 CSTN35 CSTN36 CSTN37  ROUTE ID CSTN38 CSTN39 CSTN40 CSTN40 CSTN41  ROUTE ID CSTN41  CSTN42 CSTN42	V23 OCN	PQ50 PQ50 PQ50 PQ50 PQ50  ALTITUDE PQ50 PQ50 PQ50  ALTITUDE PQ50 PQ50 PQ50 PQ50 ALTITUDE PQ50 PQ70 PQ50 PQ70 PQ50 PQ70 PQ50
T0: CRQ NFG NKX OKB	CSTN30 CSTN31 CSTN32 CSTN32 ROUTE ID CSTN34 CSTN35 CSTN36 CSTN37  ROUTE ID CSTN38 CSTN39 CSTN40 CSTN40 CSTN41  ROUTE ID CSTN42 CSTN44 CSTN44 CSTN45	V23 OCN	PQ50 PQ50 PQ50 PQ50 PQ50  ALTITUDE PQ50 PQ50  ALTITUDE PQ50 PQ50 PQ50 PQ50 PQ50 PQ40 PQ40 PQ40 PQ40 PQ40
T0: CRQ NFG NKX OKB	CSTN30 CSTN31 CSTN31 CSTN32 CSTN33  ROUTE ID CSTN34 CSTN35 CSTN36 CSTN37  ROUTE ID CSTN38 CSTN39 CSTN40 CSTN40 CSTN41  ROUTE ID CSTN41  CSTN42 CSTN42 CSTN42 CSTN44 CSTN45 CSTN46	V23 OCN	PQ50 PQ50 PQ50 PQ50 PQ50  ALTITUDE PQ50 PQ50 PQ50  ALTITUDE PQ50 PQ50 PQ50 PQ50 ALTITUDE PQ50 PQ70 PQ50 PQ70 PQ50 PQ70 PQ50
T0: CRQ NFG NKX OKB	CSTN30 CSTN31 CSTN32 CSTN32 ROUTE ID CSTN34 CSTN35 CSTN36 CSTN37  ROUTE ID CSTN38 CSTN39 CSTN40 CSTN40 CSTN41  ROUTE ID CSTN42 CSTN44 CSTN44 CSTN45	V23 OCN	PQ50 PQ50 PQ50 PQ50 PQ50  ALTITUDE PQ50 PQ50 PQ50  ALTITUDE PQ50 PQ50 PQ50 PQ50 PQ40 PQ40 PQ40 PQ40 PQ40 PQ40

CNO REI L65 AJO ONT RAL RIR RIV SBD	CSTN49	CI I VO DD7	IMCODOEO
		SLI V8 PDZ	JM60PQ50
L67	CSTN50	SLI V8 PDZ PDZ078R EDITS	JM60PQ50
F70	CSTN51	SLI V8 PDZ V186 NIKKL	JM60PQ50
TO:	ROUTE ID	ROUTE	ALTITUDE
HMT	CSTN52	SLI V8 PDZ V186 WESIN	JM60PQ50
CRQ NFG NKX OKB	CSTN53	SXC V208 OCN	JMPQ50
MYF NRS NZY SAN SDM SEE	CSTN54	SXC V208 LAX118R CARDI MZB320R	
		MZB	J110M90
RNM	CSTN55	SXC V208 JLI	JMPQ70
MYF NRS NZY SAN SDM SEE	CSTN56	SXC V208 OCN V23 MZB	PQ50
SAN (SANE)	CSTN57	SXC V208 OCN V165 SARGS	PQ50
NTD OXR CMA	CSTN58	SXC V208 VTU	JM80PQ60
SBA	CSTN59	SXC V208 VTU VTU282R KWANG	J100M80PQ60
LOS ANGELES AREA			
FROM: LAX West (J Class)			
TO:	ROUTE ID	ROUTE	ALTITUDE
BUR	LAXN1	LAX316R SILEX	J50
WHP VNY	LAXN2	LAX320R CANOG	J50
AVX	LAXN3	LAXX DP SLI V21 SXC	J50
FUL LGB SLI SNA TOA	LAXN4	LAXX DP SLI	J50
CCB EMT POC	LAXN5	LAXX DP SLI V8 POXKU V363 POM	J90
CNO REI L65 AJO RAL RIR RIV SBD ONT	LAXN6	LAXX DP SLI V8 PDX	J90
HMT	LAXN7	LAXX DP SLI V8 PDZ V186 WESIN	J90
L67	LAXN8	LAXX DP SLI V8 PDZ PDZ078R EDITS	J90
F70	LAXN9	LAXX DP SLI V8 PDZ V186 NIKKL	J90
CRQ NFG NKX OKB	LAXN10	LAXX DP SLI SLI171R ALBAS V25 PACIF	
		V208 OCN	J110
MYF NRS NZY SAN SDM SEE	LAXN11	LAXX DP MZB	J110
RNM	LAXN12	LAXX DP SLI SLI171R ALBAS V25 PACIF	
		V208 JLI	J110
SAN (SANE)	LAXN13	LAXX DP SLI SLI171R ALBAS V25 REDIN	
		V165 SARGS	J110
OXR CMA NTD	LAXN14	VENTURA DP VTU	J60
SBA	LAXN15	VENTURA DP VTU VTU282R KWANG	J100
SBA	LAXN15	VENTURA DP VTU VTU282R KWANG	J100
FROM: LAX East (J Class)	LAXN15	VENTURA DP VTU VTU282R KWANG	J100
	ROUTE ID	VENTURA DP VTU VTU282R KWANG  ROUTE	J100 ALTITUDE
FROM: LAX East (J Class)			
FROM: LAX East (J Class) TO:	ROUTE ID	ROUTE	ALTITUDE
FROM: LAX East (J Class) T0: BUR WHP VNY	ROUTE ID LAXN16 LAXN17	ROUTE LAX316R SILEXLAX320R CANOG	<b>altitude</b> J50
FROM: LAX East (J Class) TO: BUR WHP VNY	ROUTE ID LAXN16 LAXN17 LAXN18	ROUTE LAX316R SILEX LAX320R CANOG LAXX DP SLI V21 SXC	<b>ALTITUDE</b> J50 J50 J50
FROM: LAX East (J Class) T0: BUR WHP VNY AVX FUL LGB SLI SNA TOA	ROUTE ID LAXN16 LAXN17 LAXN18 LAXN19	ROUTE LAX316R SILEXLAX320R CANOGLAXX DP SLI V21 SXCLAXX DP SLI	<b>ALTITUDE</b> J50 J50 J50 J50 J40
FROM: LAX East (J Class) 10: BUR WHP VNY AVX FUL LGB SLI SNA TOA CCB EMT POC	ROUTE ID LAXN16 LAXN17 LAXN18 LAXN19 LAXN20	ROUTE  LAX316R SILEX  LAX320R CANOG  LAXX DP SLI  LAXX DP SLI  LAXX DP SLI V8 POXKU V363 POM	ALTITUDE J50 J50 J50 J40 J90
FROM: LAX East (J Class) 10: BUR WHP VNY AVX FUL LGB SLI SNA TOA CCB EMT POC CNO REI L65 AJO RAL RIR RIV SBD ONT	ROUTE ID LAXN16 LAXN17 LAXN18 LAXN19 LAXN20 LAXN21	ROUTE  LAX316R SILEX  LAX320R CANOG  LAXX DP SLI V21 SXC	ALTITUDE J50 J50 J50 J50 J40 J90 J90
FROM: LAX East (J Class) 10: BUR WHP VNY AVX FUL LGB SLI SNA TOA CCB EMT POC CNO REI L65 AJO RAL RIR RIV SBD ONT	ROUTE ID LAXN16 LAXN17 LAXN18 LAXN19 LAXN20 LAXN21 LAXN21	ROUTE  LAX316R SILEX  LAX320R CANOG  LAXX DP SLI V21 SXC  LAXX DP SLI  LAXX DP SLI V8 POXKU V363 POM  LAXX DP SLI V8 PDZ  LAXX DP SLI V8 PDZ	ALTITUDE J50 J50 J50 J40 J90
FROM: LAX East (J Class) T0: BUR WHP VNY AVX FUL LGB SLI SNA TOA CCB EMT POC CNO REI L65 AJO RAL RIR RIV SBD ONT HMT L67	ROUTE ID LAXN16 LAXN17 LAXN18 LAXN19 LAXN20 LAXN21 LAXN22 LAXN22	ROUTE  LAX316R SILEX  LAX320R CANOG  LAXX DP SLI V21 SXC  LAXX DP SLI V8 POXKU V363 POM  LAXX DP SLI V8 PDZ  LAXX DP SLI V8 PDZ V186 WESIN  LAXX DP SLI V8 PDZ PDZ078R EDITS	ALTITUDE J50 J50 J40 J90 J90 J90 J90
FROM: LAX East (J Class) 10: BUR WHP VNY AVX FUL LGB SLI SNA TOA CCB EMT POC CNO REI L65 AJO RAL RIR RIV SBD ONT HMT L67 F70	ROUTE ID LAXN16 LAXN17 LAXN18 LAXN19 LAXN20 LAXN21 LAXN22 LAXN22 LAXN23 LAXN24	ROUTE  LAX316R SILEX  LAX20R CANOG	ALTITUDE J50 J50 J50 J40 J90
FROM: LAX East (J Class) T0: BUR WHP VNY AVX FUL LGB SLI SNA TOA CCB EMT POC CNO REI L65 AJO RAL RIR RIV SBD ONT HMT L67	ROUTE ID LAXN16 LAXN17 LAXN18 LAXN19 LAXN20 LAXN21 LAXN22 LAXN22	ROUTE  LAX316R SILEX  LAX320R CANOG  LAXX DP SLI V21 SXC  LAXX DP SLI V8 POXKU V363 POM  LAXX DP SLI V8 PDZ  LAXX DP SLI V8 PDZ V186 WESIN  LAXX DP SLI V8 PDZ PDZ078R EDITS  LAXX DP SLI V8 PDZ V186 NIKKL  LAXX DP SLI V8 PDZ V186 NIKKL  LAXX DP SLI V8 PDZ V186 NIKKL	ALTITUDE J50 J50 J50 J40 J90 J90 J90 J90
FROM: LAX East (J Class) T0: BUR WHP VNY AVX FUL LGB SLI SNA TOA CCB EMT POC CNO REI L65 AJO RAL RIR RIV SBD ONT HMT L67 F70 CRQ NFG NKX OKB	ROUTE ID LAXN16 LAXN17 LAXN18 LAXN19 LAXN20 LAXN21 LAXN22 LAXN23 LAXN23 LAXN24 LAXN25	ROUTE  LAX316R SILEX	ALTITUDE J50 J50 J40 J90 J90 J90 J90
FROM: LAX East (J Class) 10: BUR	ROUTE ID LAXN16 LAXN17 LAXN18 LAXN19 LAXN20 LAXN21 LAXN22 LAXN22 LAXN23 LAXN24	ROUTE  LAX316R SILEX	ALTITUDE J50 J50 J50 J40 J90 J90 J90 J90
FROM: LAX East (J Class) T0: BUR WHP VNY AVX FUL LGB SLI SNA TOA CCB EMT POC CNO REI L65 AJO RAL RIR RIV SBD ONT HMT L67 F70 CRQ NFG NKX OKB	ROUTE ID LAXN16 LAXN17 LAXN18 LAXN19 LAXN20 LAXN21 LAXN22 LAXN23 LAXN23 LAXN24 LAXN25	ROUTE  LAX316R SILEX	ALTITUDE J50 J50 J50 J40 J90 J90 J90 J90
FROM: LAX East (J Class) 10: BUR WHP VNY AVX FUL LGB SLI SNA TOA CCB EMT POC CNO REI L65 AJO RAL RIR RIV SBD ONT HMT L67 F70 CRQ NFG NKX OKB	ROUTE ID LAXN16 LAXN17 LAXN18 LAXN19 LAXN20 LAXN21 LAXN22 LAXN23 LAXN23 LAXN24 LAXN25	ROUTE  LAX316R SILEX	ALTITUDE J50 J50 J50 J40 J90 J90 J90 J90
FROM: LAX East (J Class) 10: BUR WHP VNY AVX FUL LGB SLI SNA TOA CCB EMT POC CNO REI L65 AJO RAL RIR RIV SBD ONT HMT L67 F70 CRQ NFG NKX OKB	ROUTE ID LAXN16 LAXN17 LAXN18 LAXN19 LAXN20 LAXN21 LAXN22 LAXN23 LAXN23 LAXN24 LAXN25	ROUTE  LAX316R SILEX	ALTITUDE J50 J50 J50 J40 J90 J90 J90 J90 J90 J110
FROM: LAX East (J Class) 10: BUR WHP VNY AVX FUL LGB SLI SNA TOA CCB EMT POC CNO REI L65 AJO RAL RIR RIV SBD ONT HMT L67 F70 CRQ NFG NKX OKB MYF NRS NZY SAN SDM SEE	ROUTE ID LAXN16 LAXN17 LAXN18 LAXN19 LAXN20 LAXN21 LAXN22 LAXN22 LAXN23 LAXN24 LAXN25	ROUTE  LAX316R SILEX  LAX320R CANOG	ALTITUDE J50 J50 J50 J40 J90 J90 J90 J90 J90 J110
FROM: LAX East (J Class) 10: BUR WHP VNY AVX FUL LGB SLI SNA TOA CCB EMT POC CNO REI L65 AJO RAL RIR RIV SBD ONT HMT L67 F70 CRQ NFG NKX OKB MYF NRS NZY SAN SDM SEE	ROUTE ID LAXN16 LAXN17 LAXN18 LAXN19 LAXN20 LAXN21 LAXN22 LAXN22 LAXN23 LAXN24 LAXN25	ROUTE  LAX316R SILEX	ALTITUDE J50 J50 J50 J40 J90 J90 J90 J90 J90 J110
FROM: LAX East (J Class) 10: BUR WHP VNY AVX FUL LGB SLI SNA TOA CCB EMT POC CNO REI L65 AJO RAL RIR RIV SBD ONT HMT L67 F70 CRQ NFG NKX OKB MYF NRS NZY SAN SDM SEE	ROUTE ID LAXN16 LAXN17 LAXN18 LAXN19 LAXN20 LAXN21 LAXN22 LAXN23 LAXN24 LAXN25 LAXN25	ROUTE  LAX316R SILEX  LAX20R CANOG	ALTITUDE J50 J50 J50 J40 J90 J90 J90 J90 J110 J110
FROM: LAX East (J Class) 10: BUR WHP VNY	ROUTE ID LAXN16 LAXN17 LAXN18 LAXN19 LAXN20 LAXN21 LAXN22 LAXN23 LAXN24 LAXN25 LAXN26	ROUTE  LAX316R SILEX	ALTITUDE J50 J50 J50 J50 J40 J90 J90 J90 J90 J90 J110 J110 J110
FROM: LAX East (J Class)  10: BUR WHP VNY AVX FUL LGB SLI SNA TOA CCB EMT POC CNO REI L65 AJO RAL RIR RIV SBD ONT HMT L67 F70 CRQ NFG NKX OKB MYF NRS NZY SAN SDM SEE  RNM SAN (SANE)  OXR CMA NTD	ROUTE ID LAXN16 LAXN17 LAXN18 LAXN19 LAXN20 LAXN21 LAXN22 LAXN23 LAXN24 LAXN25 LAXN26  LAXN27 LAXN28 LAXN27	ROUTE  LAX316R SILEX	ALTITUDE J50 J50 J50 J50 J40 J90 J90 J90 J90 J110 J110 J110 J110 J60
FROM: LAX East (J Class) 10: BUR WHP VNY	ROUTE ID LAXN16 LAXN17 LAXN18 LAXN19 LAXN20 LAXN21 LAXN22 LAXN23 LAXN24 LAXN25 LAXN26	ROUTE  LAX316R SILEX	ALTITUDE J50 J50 J50 J50 J40 J90 J90 J90 J90 J90 J110 J110 J110
FROM: LAX East (J Class) 10: BUR	ROUTE ID LAXN16 LAXN17 LAXN18 LAXN19 LAXN20 LAXN21 LAXN22 LAXN23 LAXN24 LAXN25 LAXN26 LAXN27 LAXN26	ROUTE  LAX316R SILEX	ALTITUDE J50 J50 J50 J50 J40 J90 J90 J90 J90 J110 J110 J110 J110 J60
FROM: LAX East (J Class)  10: BUR WHP VNY AVX FUL LGB SLI SNA TOA CCB EMT POC CNO REI L65 AJO RAL RIR RIV SBD ONT HMT L67 F70 CRQ NFG NKX OKB MYF NRS NZY SAN SDM SEE  RNM SAN (SANE)  OXR CMA NTD	ROUTE ID LAXN16 LAXN17 LAXN18 LAXN19 LAXN20 LAXN21 LAXN22 LAXN23 LAXN24 LAXN25 LAXN26  LAXN27 LAXN27	ROUTE  LAX316R SILEX	ALTITUDE J50 J50 J50 J50 J40 J90 J90 J90 J90 J110 J110 J110 J110 J60 J100
FROM: LAX East (J Class) 10: BUR WHP VNY AVX FUL LGB SLI SNA TOA CCB EMT POC CNO REI L65 AJO RAL RIR RIV SBD ONT HMT L67 F70 CRQ NFG NKX OKB MYF NRS NZY SAN SDM SEE RNM SAN (SANE) OXR CMA NTD SBA FROM: LAX West and East (M Class) 10:	ROUTE ID LAXN16 LAXN17 LAXN18 LAXN19 LAXN20 LAXN21 LAXN22 LAXN23 LAXN24 LAXN25 LAXN25 LAXN26 LAXN26 LAXN27 LAXN27 LAXN28 LAXN27 LAXN28 LAXN29 LAXN30	ROUTE  LAX316R SILEX	ALTITUDE  J50  J50  J50  J40  J90  J90  J90  J110  J110  J110  ALTITUDE
FROM: LAX East (J Class) 10: BUR	ROUTE ID LAXN16 LAXN17 LAXN18 LAXN19 LAXN20 LAXN21 LAXN22 LAXN23 LAXN24 LAXN25 LAXN26  LAXN27 LAXN26  LAXN27 LAXN28 LAXN29 LAXN30	ROUTE  LAX316R SILEX	ALTITUDE J50 J50 J50 J40 J40 J90 J90 J90 J90 J110 J110 J110 J110 J1
FROM: LAX East (J Class) 10: BUR	ROUTE ID LAXN16 LAXN17 LAXN18 LAXN19 LAXN20 LAXN21 LAXN22 LAXN23 LAXN24 LAXN25 LAXN26  LAXN26  LAXN27 LAXN28 LAXN29 LAXN30  ROUTE ID LAXN31 LAXN32	ROUTE  LAX316R SILEX	ALTITUDE J50 J50 J50 J50 J40 J90 J90 J90 J90 J110 J110 J110 J110 ALTITUDE M50 M50
FROM: LAX East (J Class)  10:     BUR	ROUTE ID LAXN16 LAXN17 LAXN18 LAXN19 LAXN20 LAXN21 LAXN22 LAXN23 LAXN24 LAXN25 LAXN26  LAXN27 LAXN28 LAXN27 LAXN28 LAXN29 LAXN30  ROUTE ID LAXN31 LAXN32 LAXN32 LAXN32	ROUTE  LAX316R SILEX	ALTITUDE J50 J50 J50 J50 J40 J90 J90 J90 J90 J110 J110 J110 J110 J60 J100  ALTITUDE M50 M50 M50
FROM: LAX East (J Class) 10: BUR WHP VNY AVX FUL LGB SLI SNA TOA CCB EMT POC CNO REI L65 AJO RAL RIR RIV SBD ONT HMT L67 F70 CRQ NFG NKX OKB MYF NRS NZY SAN SDM SEE  RNM SAN (SANE)  OXR CMA NTD SBA FROM: LAX West and East (M Class) 10: BUR WHP VNY AVX FUL LGB SLI SNA TOA	ROUTE ID LAXN16 LAXN17 LAXN18 LAXN19 LAXN20 LAXN21 LAXN22 LAXN23 LAXN24 LAXN25 LAXN26  LAXN27 LAXN28 LAXN27 LAXN28 LAXN30  ROUTE ID LAXN31 LAXN32 LAXN32 LAXN33 LAXN34	ROUTE  LAX316R SILEX	ALTITUDE J50 J50 J50 J50 J40 J90 J90 J90 J90 J110 J110 J110 J110 ALTITUDE M50 M50
FROM: LAX East (J Class)  10:     BUR	ROUTE ID LAXN16 LAXN17 LAXN18 LAXN19 LAXN20 LAXN21 LAXN22 LAXN23 LAXN24 LAXN25 LAXN26  LAXN27 LAXN28 LAXN27 LAXN28 LAXN29 LAXN30  ROUTE ID LAXN31 LAXN32 LAXN32 LAXN32	ROUTE  LAX316R SILEX	ALTITUDE J50 J50 J50 J40 J90 J90 J90 J90 J110 J110 J110 J110 ALTITUDE M50 M50 M50 M50 M50
FROM: LAX East (J Class) 10: BUR	ROUTE ID LAXN16 LAXN17 LAXN18 LAXN19 LAXN20 LAXN21 LAXN22 LAXN23 LAXN24 LAXN25  LAXN26  LAXN27 LAXN28 LAXN27 LAXN28 LAXN30  ROUTE ID LAXN31 LAXN32 LAXN32 LAXN33 LAXN34 LAXN35	ROUTE  LAX316R SILEX	ALTITUDE J50 J50 J50 J50 J40 J90 J90 J90 J90 J110 J110 J110 J110 ALTITUDE M50 M50 M50 M50 M50
FROM: LAX East (J Class) 10: BUR WHP VNY AVX FUL LGB SLI SNA TOA CCB EMT POC CNO REI L65 AJO RAL RIR RIV SBD ONT HMT L67 F70 CRQ NFG NKX OKB MYF NRS NZY SAN SDM SEE  RNM SAN (SANE) OXR CMA NTD SBA FROM: LAX West and East (M Class) 10: BUR WHP VNY AVX FUL LGB SLI SNA TOA	ROUTE ID LAXN16 LAXN17 LAXN18 LAXN19 LAXN20 LAXN21 LAXN22 LAXN23 LAXN24 LAXN25 LAXN26  LAXN27 LAXN28 LAXN27 LAXN28 LAXN30  ROUTE ID LAXN31 LAXN32 LAXN32 LAXN33 LAXN34	ROUTE  LAX316R SILEX	ALTITUDE J50 J50 J50 J40 J90 J90 J90 J90 J110 J110 J110 J110 ALTITUDE M50 M50 M50 M50 M50

TO:	ROUTE ID	ROUTE	ALTITUDE
HMT	LAXN37	SEAL BEACH DP SLI V8 PDZ V186	
		WESIN	M50
L67	LAXN38	SEAL BEACH DP SLI V8 PDZ PDZ078R	
207	2,011100	EDITS	M50
F70	LAXN39	SEAL BEACH DP SLI V8 PDZ V186	WISO
F/U	LAXIVS9		MEO
and the they are a true		NIKKL	M50
CRQ NFG NKX OKB (LAXW)	LAXN40	SEAL BEACH DP SLI SLI171R ALBAS	
		V25 PACIF V208 OCN	M90
CRQ NFG NKX OKB (LAXE)	LAXN41	SEAL BEACH DP SLI SLI148R V25 PACIF	
		V208 OCN	M90
MYF NRS NZY SAN SDM SEE (LAXW)	LAXN42	SEAL BEACH DP SLI SLI171R ALBAS	
		V25 PACIF V208 LAX118R	
		CARDI MZB320R MZB	M90
MYF NRS NZY SAN SDM SEE (LAXE)	LAXN43	SEAL BEACH DP SLI SLI148R V25 PACIF	
,		V208 MZB320R MZB	M90
SAN (SANE) (LAXW)	LAXN44	SEAL BEACH DP SLI SLI171R ALBAS	
On (On (C) (E) (C)	D 0111-1-1	V25 REDIN V165 SARGS	M90
CAN (CANE) (LAVE)	LAVNAE		IVISO
SAN (SANE) (LAXE)	LAXN45	SEAL BEACH DP SLI SLI148R V25	1100
B111/2 1/21/2		REDIN V165 SARGS	M90
RNM(LAXW)	LAXN46	SEAL BEACH DP SLI SLI171R ALBAS	
		V25 PACIF V208 JLI	M90
RNM(LAXE)	LAXN47	SEAL BEACH DP SLI SLI148R V25 PACIF	
		V208 JLI	M90
OXR CMA NTD (LAXW)	LAXN48	VENTURA DP VTU	M60
OXR CMA NTD (LAXE)	LAXN49	CHATY DP VTU	M60
SBA (LAXW)	LAXN50	VENTURA DP VTU VTU282R KWANG	M60
SBA (LAXE)	LAXN51	CHATY DP KWANG	M60
FROM: LAX West and East (P and Q Class)			
TO:	ROUTE ID	ROUTE	ALTITUDE
BUR	LAXN52	LAX316R SILEX	PQ40
WHP VNY	LAXN53	LAX320R CANOG	PQ40
AVX	LAXN54	SEAL BEACH DP SLI V21 SXC	PQ40
FUL LGB SLI SNA TOA	LAXN55	SEAL BEACH DP SLI	PQ40
CCB EMT POC	LAXN56	SEAL BEACH DP SLI V8 POXKU V363	
		POM	PQ50
CNO REI L65 AJO RAL RIR RIV SBD ONT	LAXN57	SEAL BEACH DP SLI V8 PDZ	PQ50
HMT	LAXN58	SEAL BEACH DP SLI V8 PDZ V186	1 000
11W11	LAXIVOO	WESIN	POEO
L67	LAXN59	SEAL BEACH DP SLI V8 PDZ PDZ078R	PQ50
LO7	LAXINGS		DOEO
F70	LAVALOO	EDITS	PQ50
F70	LAXN60	SEAL BEACH DP SLI V8 PDZ V186	
		NIKKL	PQ50
CRQ NFG NKX OKB	LAXN61	SEAL BEACH DP SLI V64 V363 DANAH	
		V23 OCN	PQ50
CRQ NFG NKX OKB (SNAN)	LAXN62	SEAL BEACH DP SLI V23 OCN	PQ50
MYF NRS NZY SAN SDM SEE	LAXN63	SEAL BEACH DP SLI V64 V363 DANAH	
		V23 MZB	PQ50
MYF NRS NZY SAN SDM SEE (SNAN)	LAXN64	SEAL BEACH DP SLI V23 MZB	PQ50
RNM	LAXN65	SEAL BEACH DP SLI V64 V363 DANAH	
		V23 OCN JLI	PQ70
RNM (SNAN)	LAXN66	SEAL BEACH DP SLI V23 OCN V208 JLI	PQ70
SAN (SANE)	LAXN67	SEAL BEACH DP SLI V64 V363 DANAH	•
		V165 SARGS	PQ50
OXR CMA NTD	LAXN68	VNY	PQ40
SBA (LAXW)	LAXN69	VENTURA DP VTU VTU282R KWANG	PQ60
SBA (LAXE)	LAXN70	CHATY DP KWANG	PQ60
· · · · · · · · · · · · · · · · · · ·			
FROM: HHR TOA (RWY29)			
TO:	ROUTE ID	ROUTE	ALTITUDE
BUR	SCTN1	SMO SMO311R SILEX	JM50PQ40
WHP VNY	SCTN2	SMO SMO317R CANOG	JM50PQ40
AVX	SCTN3	SXC	JM50PQ40
FUL LGB SLI SNA TOA	SCTN4	LIMBO V64 SLI	JM50PQ40
FUL LGB SLI SNA TOA (LAXE)	SCTN5	SLI	JMPQ40
CCB EMT POC	SCTN6	LIMBO V64 SLI V8 POXKU V363 POM	J90MPQ50
CNO REI L65 AJO RAL RIR RIV SBD ONT	SCTN7	LIMBO V64 SLI V8 PDZ	J90MPQ50
HMT	SCTN8	LIMBO V64 SLI V8 PDZ V186 WESIN	J90MPQ50
	001110	DO 10- 0L1 10 1 DZ 1100 WESHN	355WII Q50

TO:	ROUTE ID	ROUTE	ALTITUDE
L67	SCTN9	LIMBO V64 SLI V8 PDZ PDZ078R EDITS.	J90MPQ50
F70	SCTN10	LIMBO V64 SLI V8 PDZ V186 NIKKL	J90MPQ50
CRQ NFG NKX OKB	SCTN11	LIMBO V64 V363 DANAH V23 OCN	PQ50
CRQ NFG NKX OKB	SCTN12	LIMBO V64 SLI V23 OCN	J110M90
CRQ NFG NKX OKB (LAXE)	SCTN13	SLI SLI148R V25 PACIF V208 OCN	J110M90
CRQ NFG NKX OKB (SNAN)	SCTN14	LIMBO V64 SLI V23 OCN	PQ50
MYF NRS NZY SAN SDM SEE	SCTN15	LIMBO V64 V363 DANAH V23 MZB	PQ50
MYF NRS NZY SAN SDM SEE (LAXE)	SCTN16	SLI V64 V363 DANAH V23 MZB	PQ50
MYF NRS NZY SAN SDM SEE	SCTN17	LIMBO V64 WILMA V25 PACIF V208	
		LAX118R CARDI MZB320R MZB	J110M90
MYF NRS NZY SAN SDM SEE (LAXE)	SCTN18	SLI SLI148R V25 PACIF V208 MZB320R	311011100
WIT NAS NET SAN SDW SEE (LAXE)	SCHILD		
		MZB	J110M90
MYF NRS NZY SAN SDM SEE (SNAN)	SCTN19	LIMBO V64 SLI V23 MZB	PQ50
RNM	SCTN20	LIMBO V64 V363 DANAH V23 OCN	
		V208 JLI	PQ70
RNM (SNAN)	SCTN21	LIMBO V64 SLI V23 OCN V208 JLI	PQ70
RNM	SCTN22	LIMBO V64 SLI V23 OCN V208 JLI	J110M90
RNM (LAXE)	SCTN23	SLI SLI148R V25 PACIF V208 JLI	J110M90
SAN (SANE)	SCTN24	LIMBO V64 V363 DANAH V165 SARGS	PQ50
SAN (SANE)	SCTN25	LIMBO V64 WILMA V25 REDIN V165	
		SARGS	J110M90
OXR CMA NTD	SCTN26	SMO VNY	PQ40
OXR CMA NTD	SCTN27	LAX VTU	JM60
			JIVIOU
SBA	SCTN28	SMO V107 SADDE V299 VTU VTU282R	
		KWANG	J100MPQ60
SBA (LAXE)	SCTN29	LAX V23 V186 DEANO V27 KWANG	JM50PQ40
EDW LOO MHV PMD WJF IYK NID TSP			
VCV	SCTN30	LAX V165 LANGE V518 PMD	JMPQ70
	0011100	EW VIOLENCE TOIS I MEMILIMINI	3 Q. O
FROM: SMO			
	DOUTE ID	DOUTE	ALTITUDE
TO:	ROUTE ID	ROUTE	ALTITUDE
BUR	SMON1	SMO SMO311R SILEX	JM50PQ40
WHP VNY	SMON2	SMO SMO317R CANOG	JM50PQ40
AVX	SMON3	SMO SMO125R SXC350R SXC	M50PQ40
FUL LGB SLI SNA TOA	SMON4	SM0 SM0125R V64 SLI	M50PQ40
FUL LGB SLI SNA TOA	SMON5	SLI	J50
		SM0 LAX V23 SLI	
FUL LGB SLI SNA TOA (LAXE)	SMON6		JMPQ40
CCB EMT POC	SMON7	SMO SMO125R V64 SLI V8 POXKU	
		V363 POM	MPQ50
CCB EMT POC	SMON8	SLI V8 POXKU V363 POM	J90
CNO REI L65 AJO RAL RIR RIV SBD ONT	SMON9	SMO SMO125R V64 SLI V8 PDZ	MPQ50
CNO REI L65 AJO RAL RIR RIV SBD ONT	SMON10	SLI V8 PDZ	J90 <sup>*</sup>
HMT	SMON11	SMO SM0125R V64 SLI V8 PDZ V186	300
11IVI1	SIVIONII		
		WESIN	
HMT			MPQ50
	SMON12	SLI V8 PDZ V186 WESIN	J90
L67	SMON13	SLI V8 PDZ V186 WESIN SMO SMO125R V64 SLI V8 PDZ	-
		SMO SMO125R V64 SLI V8 PDZ	190
L67	SMON13	SMO SMO125R V64 SLI V8 PDZ PDZ078R EDITS	J90 MPQ50
L67	SMON13 SMON14	SMO SM0125R V64 SLI V8 PDZ PDZ078R EDITSSLI V8 PDZ PDZ078R EDITS	190
L67	SMON13	SMO SM0125R V64 SLI V8 PDZ PDZ078R EDITS SLI V8 PDZ PDZ078R EDITS SMO SM0125R V64 SLI V8 PDZ V186	J90 MPQ50 J90
L67	SMON13 SMON14	SMO SM0125R V64 SLI V8 PDZ PDZ078R EDITSSLI V8 PDZ PDZ078R EDITS	J90 MPQ50
L67	SMON13 SMON14	SMO SM0125R V64 SLI V8 PDZ PDZ078R EDITS SLI V8 PDZ PDZ078R EDITS SMO SM0125R V64 SLI V8 PDZ V186	J90 MPQ50 J90
L67	SMON13 SMON14 SMON15 SMON16	SMO SMO125R V64 SLI V8 PDZ PDZO78R EDITSSLI V8 PDZ PDZO78R EDITSSMO SMO125R V64 SLI V8 PDZ V186 NIKKLSLI V8 PDZ V186 NIKKLSLI V8 PDZ V186	J90 MPQ50 J90 MPQ50
L67	SMON13 SMON14 SMON15	SMO SMO125R V64 SLI V8 PDZ PDZ078R EDITS SLI V8 PDZ PDZ078R EDITS SMO SMO125R V64 SLI V8 PDZ V186 NIKKL SLI V8 PDZ V186 NIKKL SMO SMO125R V64 V363 DANAH V23	J90 MPQ50 J90 MPQ50 J90
L67	SMON13 SMON14 SMON15 SMON16 SMON17	SMO SMO125R V64 SLI V8 PDZ PDZ078R EDITS SLI V8 PDZ PDZ078R EDITS SMO SMO125R V64 SLI V8 PDZ V186 NIKKL SLI V8 PDZ V186 NIKKL SMO SMO125R V64 V363 DANAH V23 OCN	J90 MPQ50 J90 MPQ50 J90 PQ50
L67	SMON13 SMON14 SMON15 SMON16 SMON17 SMON18	SMO SM0125R V64 SLI V8 PDZ PDZ078R EDITS	J90 MPQ50 J90 MPQ50 J90 PQ50 M90
L67	SMON13 SMON14 SMON15 SMON16 SMON17 SMON18 SMON19	SMO SM0125R V64 SLI V8 PDZ PDZ078R EDITS SLI V8 PDZ PDZ078R EDITS SMO SM0125R V64 SLI V8 PDZ V186 NIKKL SLI V8 PDZ V186 NIKKL SMO SM0125R V64 V363 DANAH V23 OCN SMO SM0125R V64 SLI V23 OCN SXC V208 OCN	J90 MPQ50 J90 MPQ50 J90 PQ50
L67	SMON13 SMON14 SMON15 SMON16 SMON17 SMON18	SMO SM0125R V64 SLI V8 PDZ PDZ078R EDITS	J90 MPQ50 J90 MPQ50 J90 PQ50 M90
L67	SMON13 SMON14 SMON15 SMON16 SMON17 SMON18 SMON19	SMO SM0125R V64 SLI V8 PDZ PDZ078R EDITS SLI V8 PDZ PDZ078R EDITS SMO SM0125R V64 SLI V8 PDZ V186 NIKKL SLI V8 PDZ V186 NIKKL SMO SM0125R V64 V363 DANAH V23 OCN SMO SM0125R V64 SLI V23 OCN SXC V208 OCN	J90 MPQ50 J90 MPQ50 J90 PQ50 M90
L67	SMON13 SMON14 SMON15 SMON16 SMON17 SMON18 SMON19 SMON20	SMO SM0125R V64 SLI V8 PDZ PDZ078R EDITS SLI V8 PDZ PDZ078R EDITS SMO SM0125R V64 SLI V8 PDZ V186 NIKKL SLI V8 PDZ V186 NIKKL SMO SM0125R V64 V363 DANAH V23 OCN SMO SM0125R V64 SLI V23 OCN SXC V208 OCN SMO LAX V23 SLI SLI148R V25 PACIF V208 OCN	J90 MPQ50 J90 MPQ50 J90 PQ50 M90 J110 J110M90
L67	SMON13 SMON14 SMON15 SMON16 SMON17 SMON18 SMON19 SMON20 SMON21	SMO SM0125R V64 SLI V8 PDZ PDZ078R EDITS	MPQ50 J90 MPQ50 J90 PQ50 M90 J110
L67	SMON13 SMON14 SMON15 SMON16 SMON17 SMON18 SMON19 SMON20	SMO SM0125R V64 SLI V8 PDZ PDZ078R EDITS SLI V8 PDZ PDZ078R EDITS SMO SM0125R V64 SLI V8 PDZ V186 NIKKL SLI V8 PDZ V186 NIKKL SMO SM0125R V64 V363 DANAH V23 OCN SMO SM0125R V64 SLI V23 OCN SXC V208 OCN SMO LAX V23 SLI SLI148R V25 PACIF V208 OCN SMO SM0125R V64 SLI V23 OCN SMO SM0125R V64 SLI V23 OCN SMO SM0125R V64 V363 DANAH V23	MPQ50 J90 MPQ50 J90 PQ50 M90 J110 J110M90 PQ50
L67	SMON13 SMON14 SMON15 SMON16 SMON17 SMON18 SMON19 SMON20 SMON21 SMON22	SMO SM0125R V64 SLI V8 PDZ PDZ078R EDITS SLI V8 PDZ PDZ078R EDITS SMO SM0125R V64 SLI V8 PDZ V186 NIKKL SLI V8 PDZ V186 NIKKL SMO SM0125R V64 V363 DANAH V23 OCN SMO SM0125R V64 SLI V23 OCN SXC V208 OCN SMO LAX V23 SLI SLI148R V25 PACIF V208 OCN SMO SM0125R V64 SLI V23 OCN SMO SM0125R V64 V363 DANAH V23 MZB	J90 MPQ50 J90 MPQ50 J90 PQ50 M90 J110 J110M90
L67	SMON13 SMON14 SMON15 SMON16 SMON17 SMON18 SMON19 SMON20 SMON21	SMO SM0125R V64 SLI V8 PDZ PDZ078R EDITS SLI V8 PDZ PDZ078R EDITS SMO SM0125R V64 SLI V8 PDZ V186 NIKKL SLI V8 PDZ V186 NIKKL SMO SM0125R V64 V363 DANAH V23 OCN SMO SM0125R V64 SLI V23 OCN SXC V208 OCN SMO LAX V23 SLI SLI148R V25 PACIF V208 OCN SMO SM0125R V64 SLI V23 OCN SMO SM0125R V64 SLI V23 OCN SMO SM0125R V64 V363 DANAH V23	MPQ50 J90 MPQ50 J90 PQ50 M90 J110 J110M90 PQ50
L67	SMON13 SMON14 SMON15 SMON16 SMON17 SMON18 SMON19 SMON20 SMON21 SMON22	SMO SM0125R V64 SLI V8 PDZ PDZ078R EDITS SLI V8 PDZ PDZ078R EDITS SMO SM0125R V64 SLI V8 PDZ V186 NIKKL SLI V8 PDZ V186 NIKKL SMO SM0125R V64 V363 DANAH V23 OCN SMO SM0125R V64 SLI V23 OCN SXC V208 OCN SMO LAX V23 SLI SLI148R V25 PACIF V208 OCN SMO SM0125R V64 SLI V23 OCN SMO SM0125R V64 V363 DANAH V23 MZB	MPQ50 J90 MPQ50 J90 PQ50 M90 J110 J110M90 PQ50 PQ50
L67	SMON13 SMON14 SMON15 SMON16 SMON17 SMON18 SMON19 SMON20 SMON21 SMON22 SMON23	SMO SM0125R V64 SLI V8 PDZ PDZ078R EDITS	J90  MPQ50 J90  MPQ50 J90  PQ50 M90 J110  J110M90 PQ50  PQ50  PQ50
L67	SMON13 SMON14 SMON15 SMON16 SMON17 SMON18 SMON19 SMON20 SMON21 SMON22 SMON23 SMON23	SMO SM0125R V64 SLI V8 PDZ PDZ078R EDITS SLI V8 PDZ PDZ078R EDITS SMO SM0125R V64 SLI V8 PDZ V186 NIKKL SLI V8 PDZ V186 NIKKL SLI V8 PDZ V186 NIKKL SMO SM0125R V64 V363 DANAH V23 OCN SMO SM0125R V64 SLI V23 OCN SXC V208 OCN SMO LAX V23 SLI SLI148R V25 PACIF V208 OCN SMO SM0125R V64 V363 DANAH V23 MZB SMO LAX V23 SLI V64 V363 DANAH V23 MZB SMO LAX V23 SLI V64 V363 DANAH V23 MZB SMO SM0125R V64 SLI V23 MZB SMO SM0125R V64 SLI V23 MZB	MPQ50 J90 MPQ50 J90 PQ50 M90 J110 J110M90 PQ50 PQ50
L67	SMON13 SMON14 SMON15 SMON16 SMON17 SMON18 SMON19 SMON20 SMON21 SMON22 SMON23	SMO SM0125R V64 SLI V8 PDZ PDZ078R EDITS SLI V8 PDZ PDZ078R EDITS SMO SM0125R V64 SLI V8 PDZ V186 NIKKL SLI V8 PDZ V186 NIKKL SMO SM0125R V64 V363 DANAH V23 OCN SMO SM0125R V64 SLI V23 OCN SXC V208 OCN SMO LAX V23 SLI SLI148R V25 PACIF V208 OCN SMO SM0125R V64 SLI V23 OCN SMO SM0125R V64 V363 DANAH V23 MZB SMO SM0125R V64 V363 DANAH V23 MZB SMO LAX V23 SLI V64 V363 DANAH V23 MZB SMO SM0125R V64 SLI V23 MZB	MPQ50 J90 MPQ50 J90 PQ50 M90 J110 J110M90 PQ50 PQ50 M90
L67	SMON13 SMON14 SMON15 SMON16 SMON17 SMON18 SMON19 SMON20 SMON21 SMON22 SMON23 SMON23	SMO SMO125R V64 SLI V8 PDZ PDZO78R EDITS SLI V8 PDZ PDZO78R EDITS SMO SMO125R V64 SLI V8 PDZ V186 NIKKL SLI V8 PDZ V186 NIKKL SMO SMO125R V64 V363 DANAH V23 OCN SMO SMO125R V64 SLI V23 OCN SMO SMO125R V64 SLI V23 OCN SMO LAX V23 SLI SLI148R V25 PACIF V208 OCN SMO SMO125R V64 SLI V23 OCN SMO SMO125R V64 SLI V23 OCN SMO SMO125R V64 SLI V23 DANAH V23 MZB SMO LAX V23 SLI V64 V363 DANAH V23 MZB SMO SMO125R V64 SLI V23 MZB SMO SMO125R V64 SLI V23 MZB SMO SMO125R V64 SLI V23 MZB SMC SMO125R V64 SLI V23 MZB SMC V208 LAX118R CARDI MZB320R MZB	J90  MPQ50 J90  MPQ50 J90  PQ50 M90 J110  J110M90 PQ50  PQ50  PQ50
L67	SMON13 SMON14 SMON15 SMON16 SMON17 SMON18 SMON19 SMON20 SMON21 SMON22 SMON23 SMON23	SMO SM0125R V64 SLI V8 PDZ PDZ078R EDITS SLI V8 PDZ PDZ078R EDITS SMO SM0125R V64 SLI V8 PDZ V186 NIKKL SLI V8 PDZ V186 NIKKL SMO SM0125R V64 V363 DANAH V23 OCN SMO SM0125R V64 SLI V23 OCN SXC V208 OCN SMO LAX V23 SLI SLI148R V25 PACIF V208 OCN SMO SM0125R V64 SLI V23 OCN SMO SM0125R V64 V363 DANAH V23 MZB SMO SM0125R V64 V363 DANAH V23 MZB SMO LAX V23 SLI V64 V363 DANAH V23 MZB SMO SM0125R V64 SLI V23 MZB	MPQ50 J90 MPQ50 J90 PQ50 M90 J110 J110M90 PQ50 PQ50 M90
L67	SMON13 SMON14 SMON15 SMON16 SMON17 SMON18 SMON19 SMON20 SMON21 SMON22 SMON23 SMON23	SMO SMO125R V64 SLI V8 PDZ PDZO78R EDITS SLI V8 PDZ PDZO78R EDITS SMO SMO125R V64 SLI V8 PDZ V186 NIKKL SLI V8 PDZ V186 NIKKL SMO SMO125R V64 V363 DANAH V23 OCN SMO SMO125R V64 SLI V23 OCN SMO SMO125R V64 SLI V23 OCN SMO LAX V23 SLI SLI148R V25 PACIF V208 OCN SMO SMO125R V64 SLI V23 OCN SMO SMO125R V64 SLI V23 OCN SMO SMO125R V64 SLI V23 DANAH V23 MZB SMO LAX V23 SLI V64 V363 DANAH V23 MZB SMO SMO125R V64 SLI V23 MZB SMO SMO125R V64 SLI V23 MZB SMO SMO125R V64 SLI V23 MZB SMC SMO125R V64 SLI V23 MZB SMC V208 LAX118R CARDI MZB320R MZB	MPQ50 J90 MPQ50 J90 PQ50 M90 J110 J110M90 PQ50 PQ50 M90
L67	SMON13 SMON14 SMON15 SMON16 SMON17 SMON18 SMON19 SMON20 SMON21 SMON22 SMON23 SMON23	SMO SMO125R V64 SLI V8 PDZ PDZO78R EDITS	J90  MPQ50 J90  MPQ50 J90  PQ50 M90 J110  J110M90 PQ50  PQ50 PQ50 M90  J110

TO:	ROUTE ID	ROUTE	ALTITUDE
RNM	SMON28	SMO SMO125R V64 V363 DANAH V23	
		OCN V208 JLI	PQ70
RNM (SNAN)	SMON29	SMO SM0125R V64 SLI V23 OCN V208	D070
RNM	SMON30	JLI SMO SM0125R V64 SLI V23 OCN V208	PQ70
KINIVI	311101130	JLI	M90
RNM	SMON31	SXC V208 JLI	J110
RNM (LAXE)	SMON32	SMO LAX V23 SLI V23 OCN V208 JLI	J110M90
SAN (SANE)	SMON33	SMO SMO125R V64 V363 DANAH V165	311011100
		SARGS	PQ50
SAN (SANE)	SMON34	SMO SMO125R V64 SLI V165 SARGS	M90
SAN (SANE)	SMON35	SXC V208 PACIF V25 REDIN V165	
		SARGS	J110
OXR CMA NTD	SMON36	SMO VNY	PQ40
OXR CMA NTD	SMON37	VTU	JM60
SBA	SMON38	SMO V107 SADDE V299 VTU VTU282R KWANG	J100MPQ6
SBA (LAXE)	SMON39	LAX V23 V186 DEANO V27 KWANG	JM50PQ40
EMPIRE AREA			
FROM: CCB CNO EMT HMT REI L65 AJO L67			
RAL RIR RIV SBD F70 ONT POC	DOUTE :-	DOUTE	
TO:	ROUTE ID	ROUTE	ALTITUDE
BUR VNY WHP	ONTN1	PDZ V186 VNY PDZ V197 POM V264 V186 VNY	PQ60
HHR	ONTN2 ONTN3	PDZ V197 POM V264 V186 VNYPDZ PDZ270R HHR RY25 LOC	JM80 JMPQ30
LAX	ONTN4	PDZ PDZ270R LAX RWY 24R LOC	JMPQ40
LAX (LAXE)	ONTN5	PDZ PDZ270R V394 AHEIM V8 TANDY	PQ40
LAX (LAXE)	ONTN6	PDZ V16 PRADO V363 DANAH V23 SLI	
		V8 TANDY	JM80
SMO	ONTN7	PDZ V186 DARTS	JMPQ60
AVX	ONTN8	PDZ V16 PRADO V363 DANAH SXC065R	
		SXC	JMPQ70
FUL LGB SLI TOA	ONTN9	PDZ PDZ270R V394 SLI	JMPQ40
SNA	ONTN10	PDZ PDZ270R V363 POXKU V8 SLI	JMPQ40
CRQ NFG NKX OKB MYF NRS NZY SAN SDM SEE	ONTN11 ONTN12	PDZ V186 ROBNN V458 OCN PDZ V186 HAILE V66 MZB	JM110PQ7
RNM	ONTN12 ONTN13	PDZ V186 HAILE V66 MZBPDZ V186 ROBNN V208 JLI	JM110PQ9 JM110PQ7
CMA OXR NTD	ONTN14	PDZ V186 FIM	PQ60
CMA OXR NTD	ONTN15	PDZ V197 POM V264 V186 FIM	JM80
SBA	ONTN16	PDZ V186 DEANO V27 KWANG	PQ60
SBA	ONTN17	PDZ V197 POM V264 V186 DEANO V27	
		KWANG	JM80
PT MUGU AREA			
FROM: OXR CMA	DOUTE ID	DOUTE	
TO:	ROUTE ID	ROUTE	ALTITUDE
SBA BUR	VTUN1 VTUN2	KWANGVTU054R TOAKS	JMPQ40 JMPQ50
		V10054K TOAKS	JIVIL QOO
		CMA CMAO72R GINNA	IMPO50
WHP VNY	VTUN3	CMA CMA072R GINNA	JMPQ50
WHP VNYPMD WJF EDW NID VCV IYK LOO MHV TSP	VTUN3		-
WHP VNY PMD WJF EDW NID VCV IYK LOO MHV TSP		CMA CMA072R GINNA	JMPQ70
WHP VNYPMD VCV IYK LOO MHV TSPAVX	VTUN3 VTUN4	FIM V386 PMD	JMPQ70
WHP VNY PMD WJF EDW NID VCV IYK LOO MHV TSPAVX	VTUN3 VTUN4 VTUN5	FIM V386 PMDVTU V208 SXC	JMPQ70
WHP VNY PMD WJF EDW NID VCV IYK LOO MHV TSP AVX FUL LGB SLI TOA	VTUN3 VTUN4 VTUN5	FIM V386 PMD VTU V208 SXC VTU044R GINNA V326 VNY V186	JMPQ70 JM70PQ50
WHP VNY PMD WJF EDW NID VCV IYK LOO MHV TSP AVX FUL LGB SLI TOA	VTUN3 VTUN4 VTUN5 VTUN6	FIM V386 PMD VTU V208 SXC VTU044R GINNA V326 VNY V186 ADAMM V394 SLI	JMPQ70 JM70PQ50
WHP VNY  PMD WJF EDW NID VCV IYK LOO  MHV TSP  AVX  FUL LGB SLI TOA  SNA	VTUN3 VTUN4 VTUN5 VTUN6	FIM V386 PMD VTU V208 SXC VTU044R GINNA V326 VNY V186 ADAMM V394 SLI VTU044R GINNA V326 VNY V186 BAYJY V363 POXKU V8 SLI VTU V299 SADDE V107 SMO SM0125R	JMPQ70 JM70PQ50 PQ50
WHP VNY PMD WJF EDW NID VCV IYK LOO MHV TSP	VTUN3 VTUN4 VTUN5 VTUN6 VTUN7 VTUN8	FIM V386 PMD VTU V208 SXC VTU044R GINNA V326 VNY V186 ADAMM V394 SLI VTU044R GINNA V326 VNY V186 BAYJY V363 POXKU V8 SLI VTU V299 SADDE V107 SMO SM0125R POPPR V23 SLI	JMPQ70 JM70PQ50 PQ50 PQ50
WHP VNY PMD WJF EDW NID VCV IYK LOO WHV TSP	VTUN3 VTUN4 VTUN5 VTUN6 VTUN7 VTUN8 VTUN9	FIM V386 PMD VTU V208 SXC VTU044R GINNA V326 VNY V186 ADAMM V394 SLI VTU044R GINNA V326 VNY V186 BAYJY V363 POXKU V8 SLI VTU V299 SADDE V107 SMO SM0125R POPPR V23 SLI VTU V208 SXC SLI	JMPQ70 JM70PQ50 PQ50 PQ50
WHP VNY PMD WJF EDW NID VCV IYK LOO MHV TSP	VTUN3 VTUN4 VTUN5 VTUN6 VTUN7 VTUN8	FIM V386 PMD VTU V208 SXC VTU044R GINNA V326 VNY V186 ADAMM V394 SLI VTU044R GINNA V326 VNY V186 BAYJY V363 POXKU V8 SLI VTU V299 SADDE V107 SM0 SM0125R POPPR V23 SLI VTU V208 SXC SLI VTU V208 SXC SLI VTU044R GINNA V326 VNY V186	JMPQ70 JM70PQ50 PQ50 PQ50 PQ50 JM70
WHP VNY PMD WJF EDW NID VCV IYK LOO MHV TSP	VTUN3 VTUN4 VTUN5 VTUN6 VTUN7 VTUN8 VTUN9 VTUN10	FIM V386 PMD VTU V208 SXC VTU044R GINNA V326 VNY V186 ADAMM V394 SLI VTU044R GINNA V326 VNY V186 BAYJY V363 POXKU V8 SLI VTU V299 SADDE V107 SMO SM0125R POPPR V23 SLI VTU V208 SXC SLI VTU V44R GINNA V326 VNY V186 ELM00	JMPQ70 JM70PQ50 PQ50 PQ50 PQ50 JM70
WHP VNY	VTUN3 VTUN4 VTUN5 VTUN6 VTUN7 VTUN8 VTUN9 VTUN10 VTUN11	FIM V386 PMD VTU V208 SXC VTU044R GINNA V326 VNY V186 ADAMM V394 SLI VTU044R GINNA V326 VNY V186 BAYJY V363 POXKU V8 SLI VTU V299 SADDE V107 SMO SM0125R POPPR V23 SLI VTU V208 SXC SLI VTU044R GINNA V326 VNY V186 ELMOO VTU V299 SADDE V107 SMO	JMPQ70 JM70PQ50 PQ50 PQ50 PQ50 JM70 JM70PQ50 JMPQ50
WHP VNY	VTUN3 VTUN4 VTUN5 VTUN6 VTUN7 VTUN8 VTUN9 VTUN10 VTUN11 VTUN12	FIM V386 PMD VTU V208 SXC VTU044R GINNA V326 VNY V186 ADAMM V394 SLI VTU044R GINNA V326 VNY V186 BAYJY V363 POXKU V8 SLI VTU V299 SADDE V107 SMO SM0125R POPPR V23 SLI VTU V208 SXC SLI VTU044R GINNA V326 VNY V186 ELMO0 VTU V299 SADDE V107 SMO VTU V299 SADDE V107 SMO VTU V25 EXERT	JMPQ70 JM70PQ50 PQ50 PQ50 PQ50 JM70
WHP VNY	VTUN3 VTUN4 VTUN5 VTUN6 VTUN7 VTUN8 VTUN9 VTUN10 VTUN11	FIM V386 PMD VTU V208 SXC VTU044R GINNA V326 VNY V186 ADAMM V394 SLI VTU044R GINNA V326 VNY V186 BAYJY V363 POXKU V8 SLI VTU V299 SADDE V107 SM0 SM0125R POPPR V23 SLI VTU V208 SXC SLI VTU044R GINNA V326 VNY V186 ELM00 VTU V299 SADDE V107 SM0 VTU V299 SADDE V107 SM0 VTU V295 EXERT VTU044R GINNA V326 VNY V186	JMPQ70 JM70PQ50 PQ50 PQ50 JM70 JM70PQ50 JMPQ50 JMPQ50
WHP VNYPMD WJF EDW NID VCV IYK LOO	VTUN3 VTUN4 VTUN5 VTUN6 VTUN7 VTUN8 VTUN9 VTUN10 VTUN11 VTUN12	FIM V386 PMD VTU V208 SXC VTU044R GINNA V326 VNY V186 ADAMM V394 SLI VTU044R GINNA V326 VNY V186 BAYJY V363 POXKU V8 SLI VTU V299 SADDE V107 SMO SM0125R POPPR V23 SLI VTU V208 SXC SLI VTU044R GINNA V326 VNY V186 ELMO0 VTU V299 SADDE V107 SMO VTU V299 SADDE V107 SMO VTU V25 EXERT	JMPQ70 JM70PQ50 PQ50 PQ50 PQ50 JM70 JM70PQ50 JMPQ50

## TOWER ENROUTE CONTROL

TO:	ROUTE ID	ROUTE	ALTITUDE
CNO EMT REI L65 AJO ONT POC RAL RIR RIV SBD	VTUN15	VTU044R GINNA V326 VNY V186 PDZ	PQ50
CNO EMT REI L65 AJO ONT POC RAL RIR RIV SBD	VTUN16	VTU044R GINNA V326 VNY V186 V264	
HMT	VTUN17	POM V197 PDZ VTU044R GINNA V326 VNY V186 PDZ	JM70
HMT	VTUN18	V186 WESIN VTU044R GINNA V326 VNY V186 V264	PQ50
L67	VTUN19	POM V197 PDZ V186 WESIN VTU044R GINNA V326 VNY V186 PDZ	JM70
L67	VTUN20	PDZ078R EDITS VTU044R GINNA V326 VNY V186 V264	PQ50
F70	VTUN21	POM V197 PDZ PDZ078R EDITS VTU044R GINNA V326 VNY V186 PDZ	JM70
F70	VTUN22	V186 NIKKL VTU044R GINNA V326 VNY V186 V264	PQ50
CRQ NFG NKX OKB	VTUN23	POM V197 PDZ V186 NIKKL VTU044R GINNA V326 VNY V186	JM70
CRQ NFG NKX OKB (LAXE)	VTUN24	ROBNN V458 OCNVTU044R GINNA V326 VNY V186	PQ70
CRQ NFG NKX OKB	VTUN25	ROBNN V458 OCNVTU V208 SXC V208 OCN	PQ70 J110M90
MYF NRS NZY SAN SDM SEE	VTUN26	VTU044R GINNA V326 VNY V186 HAILE V66 MZB	PQ90
MYF NRS NZY SAN SDM SEE (LAXE)	VTUN27	VTU044R GINNA V326 VNY V186 HAILE V66 MZB	PQ70
MYF NRS NZY SAN SDM SEE	VTUN28	VTU V208 SXC V208 LAX118R CARDI MZB320R MZB	J110M90
RNM	VTUN29	VTU044R GINNA V326 VNY V186 ROBNN V208 JLI	PQ70
RNM (LAXE)	VTUN30	VTU044R GINNA V326 VNY V186 ROBNN V208 JLI	PQ70
RNM	VTUN31	VTU V208 SXC V208 JLI	J110M90
SAN (SANE)	VTUN32	VTU044R GINNA V326 VNY V186 BAYJY V363 DANAH V165 SARGS	PQ50
SAN (SANE)	VTUN33	VTU V208 SXC V27 REDIN V165 SARGS	J110M90
SMX	VTUN34	V25 RZS RZS286R KOAKS	JMPQ80
IZA	VTUN35	V25 RZS RZS277R CALLI	JMPQ60
LPC	VTUN36	V27 GV0	JMPQ60
SAN DIEGO AREA FROM: CRQ MYF NFG NKX NRS NZY SAN SDM SEE RNM OKB L18 TIJ			
TO:	ROUTE ID	ROUTE	ALTITUDE
AVX	SANN1	MZB V23 OCN V208 SXC	PQ60
AVX	SANN2	MZB293R V27 SXC	J100M80
FUL LGB SNA SLI TOA LAX	SANN3	OCN V23 SLI	PQ60
FUL LGB SNA SLI TOA LAX	SANN4	MZB293R SLI148R SLI	J100M80
LAX (LAXE)	SANN5	OCN V23 SLI V8 TANDY	PQ60
LAX (LAXE)	SANN6	MZB293R SLI148R VTU114R V8 TANDY	J100M80
HHR	SANN7	OCN V23 SLI SLI340R WELLZ HHR RY25 LOC	PQ60
HHR	SANN8	MZB293R SLI148R SLI SLI340R WELLZ HHR RY25 LOC	J100M80
SM0	SANN9	OCN V23 POPPR SM0125R SM0 SM0059R ELM00	PQ60
SMO	SANNIO	MZB293R SLI148R SLI V459 DARTS	J100M80
SMO (LAXE)	SANN10	OCN V23 SLI SLI333R V186 DARTS	
SMO (LAXE)	SANN11 SANN12	MZB293R SLI148R SLI SLI333R V186	PQ60
BUR	SANN13	DARTS OCN V23 POPPR SM0125R SM0	J100M80
BUR	SANN14	SM0311R SILEX	PQ60
WHP VNY	SANN15	LAX316R SILEX OCN V23 POPPR SM0125R SM0	J100M80
		SM0317R CANOG	PQ60

TO:	ROUTE ID	ROUTE	ALTITUDE
WHP VNY	SANN16	MZB293R SLI148R SLI V23 LAX	
		LAX320R CANOG	J100M80
BUR VNY WHP (LAXE)	SANN17	OCN V23 SLI SLI333R V186 VNY	PQ60
BUR VNY WHP (LAXE)	SANN18	MZB293R SLI148R SLI SLI333R V186	
		VNY	J100M80
CNO AJO L65 REI ONT RAL RIR SBD RIV	SANN19	OCN V23 DANAH V363 POXKU V8 PDZ	PQ60
ONT SBD	SANN20	V186 TANNR HDF PETIS	JM100
CNO AJO RAL RIRL65 REI RIV	SANN21 SANN22	V186 PDZ V186 TANNR HDF	JM100 JM100
CCB EMT POC	SANN23	OCN V23 DANAH V363 POM	PQ60
CCB EMT POC	SANN24	MZB293R POM164R POM	J100M80
HMT	SANN25	OCN V23 DANAH V363 POXKU V8 PDZ	3100M00
		V186 WESIN	PQ60
HMT	SANN26	V186 WESIN	JM100
L67	SANN27	OCN V23 DANAH V363 POXKU V8 PDZ	
		PDZ078R EDITS	PQ60
L67	SANN28	V186 PDZ PDZ078R EDITS	JM100
F70	SANN29	OCN V23 DANAH V363 POXKU V8 PDZ	
		V186 NIKKL	PQ60
F70	SANN30	V186 NIKKL	JM100
OXR CMA NTD	SANN31	OCN V23 SLI SLI272R SM0125R SM0	5000
OVD OMA NTD	CANINGO	VNY MZB293R V27 SXC V208 VTU	PQ60
OXR CMA NTD CMA OXR NTD (LAXE)	SANN32 SANN33	OCN V23 SLI SLI333R V186 FIM	J100M80 PQ60
CMA OXR NTD (LAXE)	SANN34	MZB293R SLI148R SLI SLI333R V186	FQOO
OWN ONE HID (EINE)	0/111104	FIM	J100M80
SBA	SANN35	OCN V23 LAX V299 VTU VTU282R	320000
		KWANG	PQ60
SBA	SANN36	MZB293R V27 SXC V208 VTU VTU282R	•
		KWANG	J100M80
SBA (LAXE)	SANN37	OCN V23 DANAH V363 BAYJY V186	
		DEANO V27 KWANG	PQ60
CANTA DADDADA ADEA			
SANTA BARBARA AREA			
SANTA BARBARA AREA From: SBA To.	ROUTE ID	ROUTE	ALTITUDE
FROM: SBA	ROUTE ID SBAN1	ROUTE KWANG CMA CMAO78R TOAKS	<b>ALTITUDE</b> P050
FROM: SBA To:			
FROM: SBA To: Bur	SBAN1	KWANG CMA CMA078R TOAKS	PQ50
FROM: SBA TO: BUR WHP VNY BUR VNY AVX	SBAN1 SBAN2	KWANG CMA CMA078R TOAKSKWANG CMA CMA072R GINNAHENER V186 FIM FERNANDO STARKWANG VTU V208 SXC	PQ50 PQ50
FROM: SBA TO: Bur Whp vny Bur vny	SBAN1 SBAN2 SBAN3	KWANG CMA CMA078R TOAKS KWANG CMA CMA072R GINNA HENER V186 FIM FERNANDO STAR	PQ50 PQ50 J110M90
FROM: SBA TO: BUR WHP VNY BUR VNY AVX FUL LGB SLI TOA	SBAN1 SBAN2 SBAN3 SBAN4 SBAN5	KWANG CMA CMA078R TOAKS KWANG CMA CMA072R GINNA HENER V186 FIM FERNANDO STAR KWANG VTU V208 SXC KWANG CMA VNY V186 ADAMM V394 SLI	PQ50 PQ50 J110M90
FROM: SBA TO: BUR WHP VNY BUR VNY AVX	SBAN1 SBAN2 SBAN3 SBAN4	KWANG CMA CMA078R TOAKS KWANG CMA CMA072R GINNA HENER V186 FIM FERNANDO STAR KWANG VTU V208 SXC KWANG CMA VNY V186 ADAMM V394 SLI KWANG CMA VNY V186 BAYJY V363	PQ50 PQ50 J110M90 JM70PQ50
FROM: SBA T0: BUR WHP VNY BUR VNY AVX FUL LGB SLI TOA	SBAN1 SBAN2 SBAN3 SBAN4 SBAN5 SBAN6	KWANG CMA CMA078R TOAKS	PQ50 PQ50 J110M90 JM70PQ50
FROM: SBA TO: BUR WHP VNY BUR VNY AVX FUL LGB SLI TOA	SBAN1 SBAN2 SBAN3 SBAN4 SBAN5	KWANG CMA CMA078R TOAKS KWANG CMA CMA072R GINNA HENER V186 FIM FERNANDO STAR KWANG VTU V208 SXC KWANG CMA VNY V186 ADAMM V394 SLI KWANG CMA VNY V186 BAYJY V363 POXKU V8 SLI KWANG VTU V299 SADDE V107 SMO	PQ50 PQ50 J110M90 JM70PQ50 PQ50
FROM: SBA T0: BUR	SBAN1 SBAN2 SBAN3 SBAN4 SBAN5 SBAN6 SBAN7	KWANG CMA CMA078R TOAKS	PQ50 PQ50 J110M90 JM70PQ50 PQ50 PQ50
FROM: SBA 10: BUR WHP VNY BUR VNY AVX FUL LGB SLI TOA  FUL LGB SLI TOA SNA HHR  FUL LGB SLI TOA SNA HHR	SBAN1 SBAN2 SBAN3 SBAN4 SBAN5 SBAN6 SBAN7 SBAN8	KWANG CMA CMA078R TOAKS	PQ50 PQ50 J110M90 JM70PQ50 PQ50 PQ50 PQ50 J110M90
FROM: SBA T0: BUR	SBAN1 SBAN2 SBAN3 SBAN4 SBAN5 SBAN6 SBAN7 SBAN8 SBAN9	KWANG CMA CMA078R TOAKS	PQ50 PQ50 J110M90 JM70PQ50 PQ50 PQ50 PQ50 J110M90 PQ50
FROM: SBA T0: BUR	SBAN1 SBAN2 SBAN3 SBAN4 SBAN5 SBAN6 SBAN7 SBAN8 SBAN9 SBAN10	KWANG CMA CMA078R TOAKS	PQ50 PQ50 J110M90 JM70PQ50 PQ50 PQ50 PQ50 J110M90 PQ50 JM110PQ50
FROM: SBA T0: BUR WHP VNY BUR VNY AVX FUL LGB SLI TOA  HHR  FUL LGB SLI TOA SNA HHR HHR (LAXE) LAX LAX (LAXE)	SBAN1 SBAN2 SBAN3 SBAN4 SBAN5 SBAN6 SBAN7 SBAN8 SBAN9 SBAN10 SBAN10 SBAN11	KWANG CMA CMA078R TOAKS	PQ50 PQ50 J110M90 JM70PQ50 PQ50 PQ50 PQ50 J110M90 PQ50 JM110PQ50 JM70PQ50
FROM: SBA T0: BUR	SBAN1 SBAN2 SBAN3 SBAN4 SBAN5 SBAN6 SBAN7 SBAN8 SBAN9 SBAN10	KWANG CMA CMA078R TOAKS	PQ50 PQ50 J110M90 JM70PQ50 PQ50 PQ50 J110M90 PQ50 JM110PQ50 JM70PQ50 PQ50
FROM: SBA 10:  BUR  WHP VNY  BUR VNY  AVX  FUL LGB SLI TOA  SNA	SBAN1 SBAN2 SBAN3 SBAN4 SBAN5 SBAN6 SBAN7 SBAN8 SBAN9 SBAN10 SBAN11 SBAN11 SBAN12	KWANG CMA CMA078R TOAKS	PQ50 PQ50 J110M90 JM70PQ50 PQ50 PQ50 PQ50 J110M90 PQ50 JM110PQ50 JM70PQ50
FROM: SBA 10: BUR WHP VNY BUR VNY AVX FUL LGB SLI TOA  SNA	SBAN1 SBAN2 SBAN3 SBAN4 SBAN5 SBAN6 SBAN7 SBAN8 SBAN9 SBAN10 SBAN11 SBAN11 SBAN113	KWANG CMA CMA078R TOAKS	PQ50 PQ50 J110M90 JM70PQ50 PQ50 PQ50 PQ50 J110M90 PQ50 JM110PQ50 JM70PQ50 PQ50 J110M90
FROM: SBA 10:  BUR  WHP VNY  BUR VNY  AVX  FUL LGB SLI TOA  SNA  HHR  FUL LGB SLI TOA SNA HHR  HHR (LAXE)  LAX  LAX  SMO  CCB  CCB  CNO EMT REI L65 AJO POC ONT RAL RIR	SBAN1 SBAN2 SBAN3 SBAN4 SBAN5 SBAN6 SBAN7 SBAN7 SBAN8 SBAN9 SBAN10 SBAN11 SBAN11 SBAN12 SBAN13 SBAN14 SBAN15	KWANG CMA CMA078R TOAKS KWANG CMA CMA072R GINNA HENER V186 FIM FERNANDO STAR KWANG VTU V208 SXC KWANG CMA VNY V186 ADAMM V394 SLI KWANG CMA VNY V186 BAYJY V363 POXKU V8 SLI KWANG TU V299 SADDE V107 SMO SM0125R POPPR V23 SLI KWANG VTU V208 SXC SLI KWANG CMA VNY V186 ELMOO KWANG VTU V299 SADDE V107 SMO KWANG VTU V295 SXC SLI KWANG CMA VNY V186 ELMOO KWANG TU V299 SADDE V107 SMO KWANG VTU V295 EXERT KWANG CMA VNY V186 DARTS HENER FIM V186 DARTS KWANG CMA VNY V186 V264 POM HENER V186 FIM V186 V264 POM	PQ50 PQ50 J110M90 JM70PQ50 PQ50 PQ50 J110M90 PQ50 JM110PQ50 JM70PQ50 J110M90 PQ50 JM70
FROM: SBA 10:  BUR  WHP VNY  BUR VNY  AVX  FUL LGB SLI TOA  SNA  HHR  FUL LGB SLI TOA SNA HHR  HHR (LAXE)  LAX  LAX (LAXE)  SMO  SMO  CCB  CCB  CCOB  CNO EMT REI LG5 AJO POC ONT RAL RIR RIV SBD	SBAN1 SBAN2 SBAN3 SBAN4 SBAN5 SBAN6 SBAN7 SBAN8 SBAN9 SBAN10 SBAN11 SBAN11 SBAN12 SBAN13 SBAN13	KWANG CMA CMA078R TOAKS	PQ50 PQ50 J110M90 JM70PQ50 PQ50 PQ50 J110M90 PQ50 JM110PQ50 JM70PQ50 PQ50 J110M90 PQ50
FROM: SBA T0:  BUR  WHP VNY  BUR VNY  AVX  FUL LGB SLI TOA  SNA  HHR  FUL LGB SLI TOA SNA HHR  HHR (LAXE)  LAX  LAX  LAX  COB  COB  COB  COB  COB  COB  CNO EMT REI L65 AJO POC ONT RAL RIR RIV SBD  CNO EMT REI L65 AJO POC ONT RAL RIR	SBAN1 SBAN2 SBAN3 SBAN4 SBAN5 SBAN6 SBAN7 SBAN8 SBAN9 SBAN10 SBAN11 SBAN12 SBAN13 SBAN14 SBAN15 SBAN15	KWANG CMA CMA078R TOAKS  KWANG CMA CMA072R GINNA  HENER V186 FIM FERNANDO STAR  KWANG VTU V208 SXC  KWANG CMA VNY V186 ADAMM V394  SLI  KWANG CMA VNY V186 BAYJY V363  POXKU V8 SLI  KWANG VTU V299 SADDE V107 SMO  SM0125R POPPR V23 SLI  KWANG VTU V298 SXC SLI  KWANG VTU V298 SXC SLI  KWANG VTU V299 SADDE V107 SMO  KWANG VTU V299 SADDE V107 SMO  KWANG VTU V298 SAC SLI  KWANG CMA VNY V186 DARTS  KWANG CMA VNY V186 DARTS  KWANG CMA VNY V186 V264 POM  HENER FIM V186 FIM V186 V264 POM  KWANG CMA VNY V186 PDZ	PQ50 PQ50 PQ50 J110M90 JM70PQ50 PQ50 PQ50 J110M90 PQ50 JM10PQ50 JM70PQ50 PQ50 J110M90 PQ50 JM70
FROM: SBA 10:  BUR  WHP VNY  BUR VNY  AVX  FUL LGB SLI TOA  SNA	SBAN1 SBAN2 SBAN3 SBAN4 SBAN5 SBAN6 SBAN7 SBAN8 SBAN9 SBAN10 SBAN11 SBAN11 SBAN12 SBAN13 SBAN14 SBAN15 SBAN16 SBAN16	KWANG CMA CMA078R TOAKS  KWANG CMA CMA072R GINNA  HENER V186 FIM FERNANDO STAR  KWANG VTU V208 SXC  KWANG CMA VNY V186 ADAMM V394  SLI  KWANG CMA VNY V186 BAYJY V363  POXKU V8 SLI  KWANG CMA VNY V186 BAYJY V363  POXKU V8 SLI  KWANG VTU V299 SADDE V107 SMO  SM0125R POPPR V23 SLI  KWANG VTU V298 SXC SLI  KWANG VTU V298 SXC SLI  KWANG VTU V299 SADDE V107 SMO  KWANG VTU V299 SADDE V107 SMO  KWANG VTU V299 SADDE V107 SMO  KWANG VTU V298 SADDE V107 SMO  KWANG VTU V25 EXERT  KWANG CMA VNY V186 DARTS  HENER FIM V186 DARTS  HENER FIM V186 FIM V186 V264 POM  HENER V186 FIM V186 V264 POM  HENER FIM V186 V264 POM V197 PDZ  HENER FIM V186 V264 POM V197 PDZ	PQ50 PQ50 J110M90 JM70PQ50 PQ50 PQ50 J110M90 PQ50 JM110PQ50 JM70PQ50 J110M90 PQ50 JM70
FROM: SBA T0:  BUR  WHP VNY  BUR VNY  AVX  FUL LGB SLI TOA  SNA  HHR  FUL LGB SLI TOA SNA HHR  HHR (LAXE)  LAX  LAX  LAX  COB  COB  COB  COB  COB  COB  CNO EMT REI L65 AJO POC ONT RAL RIR RIV SBD  CNO EMT REI L65 AJO POC ONT RAL RIR	SBAN1 SBAN2 SBAN3 SBAN4 SBAN5 SBAN6 SBAN7 SBAN8 SBAN9 SBAN10 SBAN11 SBAN12 SBAN13 SBAN14 SBAN15 SBAN15	KWANG CMA CMA078R TOAKS KWANG CMA CMA072R GINNA HENER V186 FIM FERNANDO STAR KWANG VTU V208 SXC KWANG CMA VNY V186 ADAMM V394 SLI KWANG CMA VNY V186 BAYJY V363 POXKU V8 SLI KWANG VTU V299 SADDE V107 SMO SM0125R P0PPR V23 SLI KWANG VTU V299 SADDE V107 SMO SM0125R P0PPR V23 SLI KWANG VTU V299 SADDE V107 SMO KWANG VTU V299 SADDE V107 SMO KWANG VTU V295 EXERT KWANG CMA VNY V186 ELMOO KWANG VTU V296 EXERT KWANG CMA VNY V186 DARTS HENER FIM V186 DARTS HENER FIM V186 FIM V186 V264 POM HENER V186 FIM V186 V264 POM KWANG CMA VNY V186 PDZ HENER FIM V186 V264 POM V197 PDZ KWANG CMA VNY V186 PDZ V186	PQ50 PQ50 J110M90 JM70PQ50 PQ50 PQ50 PQ50 J110M90 PQ50 JM110PQ50 JM70PQ50 J110M90 PQ50 JM70 PQ50 JM70
FROM: SBA T0: BUR WHP VNY BUR VNY AVX FUL LGB SLI TOA  SNA  HHR  FUL LGB SLI TOA SNA HHR HHR (LAXE) LAX (LAXE) SMO SMO CCB CCB CCB CCO EMT REI L65 AJO POC ONT RAL RIR RIV SBD CNO EMT REI L65 AJO POC ONT RAL RIR RIV SBD HMT	SBAN1 SBAN2 SBAN3 SBAN4 SBAN5 SBAN6 SBAN7 SBAN8 SBAN9 SBAN10 SBAN11 SBAN12 SBAN13 SBAN14 SBAN15 SBAN15 SBAN15	KWANG CMA CMA078R TOAKS	PQ50 PQ50 PQ50 J110M90 JM70PQ50 PQ50 PQ50 J110M90 PQ50 JM10PQ50 JM70PQ50 PQ50 J110M90 PQ50 JM70
FROM: SBA 10:  BUR  WHP VNY  BUR VNY  AVX  FUL LGB SLI TOA  SNA	SBAN1 SBAN2 SBAN3 SBAN4 SBAN5 SBAN6 SBAN7 SBAN8 SBAN9 SBAN10 SBAN11 SBAN11 SBAN12 SBAN13 SBAN14 SBAN15 SBAN16 SBAN16	KWANG CMA CMA078R TOAKS  KWANG CMA CMA072R GINNA  HENER V186 FIM FERNANDO STAR  KWANG VTU V208 SXC  KWANG CMA VNY V186 ADAMM V394  SLI  KWANG CMA VNY V186 BAYJY V363  POXKU V8 SLI  KWANG VTU V299 SADDE V107 SMO  SM0125R P0PPR V23 SLI  KWANG VTU V299 SADDE V107 SMO  SM0125R P0PPR V23 SLI  KWANG VTU V299 SADDE V107 SMO  KWANG VTU V299 SADDE V107 SMO  KWANG CMA VNY V186 ELMOO  KWANG VTU V299 SADDE V107 SMO  KWANG VTU V299 SADDE V107 SMO  KWANG CMA VNY V186 DARTS  KWANG CMA VNY V186 DARTS  KWANG CMA VNY V186 V264 POM  KWANG CMA VNY V186 PDZ  HENER FIM V186 V264 POM  KWANG CMA VNY V186 PDZ  HENER FIM V186 V264 POM V197 PDZ  KWANG CMA VNY V186 PDZ V186  WESIN  HENER V186 V264 POM V197 PDZ	PQ50 PQ50 PQ50 J110M90 JM70PQ50 PQ50 PQ50 J110M90 PQ50 JM10PQ50 JM70PQ50 PQ50 JM70 PQ50 JM70 PQ50 JM70 PQ50 JM70 PQ50
FROM: SBA 10: BUR WHP VNY BUR VNY AVX FUL LGB SLI TOA  SNA	SBAN1 SBAN2 SBAN3 SBAN4 SBAN5 SBAN6 SBAN7 SBAN8 SBAN9 SBAN10 SBAN11 SBAN12 SBAN13 SBAN14 SBAN15 SBAN16 SBAN15 SBAN16 SBAN17 SBAN18 SBAN18	KWANG CMA CMA078R TOAKS KWANG CMA CMA072R GINNA HENER V186 FIM FERNANDO STAR KWANG VTU V208 SXC KWANG CMA VNY V186 ADAMM V394 SLI KWANG CMA VNY V186 BAYJY V363 POXKU V8 SLI KWANG CMA VNY V186 BAYJY V363 POXKU V8 SLI KWANG VTU V299 SADDE V107 SMO SM0125R POPPR V23 SLI KWANG VTU V298 SXC SLI KWANG VTU V299 SADDE V107 SMO KWANG VTU V299 SADDE V107 SMO KWANG VTU V299 SADDE V107 SMO KWANG VTU V298 SADDE V107 SMO KWANG VTU V298 FART KWANG CMA VNY V186 DARTS HENER FIM V186 DARTS KWANG CMA VNY V186 V264 POM HENER V186 FIM V186 V264 POM KWANG CMA VNY V186 PDZ HENER FIM V186 V264 POM V197 PDZ KWANG CMA VNY V186 PDZ V186 WESIN HENER V186 V264 POM V197 PDZ V186 WESIN	PQ50 PQ50 J110M90 JM70PQ50 PQ50 PQ50 PQ50 J110M90 PQ50 JM110PQ50 JM70PQ50 J110M90 PQ50 JM70 PQ50 JM70
FROM: SBA T0: BUR WHP VNY BUR VNY AVX FUL LGB SLI TOA  SNA  HHR  FUL LGB SLI TOA SNA HHR HHR (LAXE) LAX (LAXE) SMO SMO CCB CCB CCB CCO EMT REI L65 AJO POC ONT RAL RIR RIV SBD CNO EMT REI L65 AJO POC ONT RAL RIR RIV SBD HMT	SBAN1 SBAN2 SBAN3 SBAN4 SBAN5 SBAN6 SBAN7 SBAN8 SBAN9 SBAN10 SBAN11 SBAN12 SBAN13 SBAN14 SBAN15 SBAN15 SBAN15	KWANG CMA CMA078R TOAKS KWANG CMA CMA072R GINNA HENER V186 FIM FERNANDO STAR KWANG VTU V208 SXC KWANG CMA VNY V186 ADAMM V394 SLI KWANG CMA VNY V186 BAYJY V363 POXKU V8 SLI KWANG VTU V299 SADDE V107 SMO SM0125R P0PPR V23 SLI KWANG VTU V299 SADDE V107 SMO SM0125R P0PPR V23 SLI KWANG VTU V299 SADDE V107 SMO KWANG VTU V299 SADDE V107 SMO KWANG VTU V299 SADDE V107 SMO KWANG VTU V29 SADDE V107 SMO KWANG VTU V298 SADDE V107 SMO KWANG CMA VNY V186 PARTS HENER FIM V186 DARTS HENER FIM V186 FIM V186 V264 POM HENER V186 FIM V186 V264 POM KWANG CMA VNY V186 PDZ HENER FIM V186 V264 POM V197 PDZ KWANG CMA VNY V186 PDZ V186 WESIN HENER V186 V264 POM V197 PDZ V186 WESIN KWANG CMA VNY V186 PDZ PDZ078R	PQ50 PQ50 JJ110M90 JM70PQ50 PQ50 PQ50 PQ50 JJ110M90 PQ50 JM10PQ50 JM70PQ50 JJ10M90 PQ50 JM70 PQ50 JJ110M90 PQ50 JJ110M90 PQ50
FROM: SBA T0: BUR WHP VNY BUR VNY AVX FUL LGB SLI TOA  SNA	SBAN1 SBAN2 SBAN3 SBAN4 SBAN5 SBAN6 SBAN7 SBAN8 SBAN9 SBAN10 SBAN11 SBAN12 SBAN13 SBAN14 SBAN15 SBAN15 SBAN16 SBAN17 SBAN18 SBAN19 SBAN19 SBAN19	KWANG CMA CMA078R TOAKS KWANG CMA CMA072R GINNA HENER V186 FIM FERNANDO STAR KWANG VTU V208 SXC KWANG CMA VNY V186 ADAMM V394 SLI KWANG CMA VNY V186 BAYJY V363 POXKU V8 SLI KWANG CTU V299 SADDE V107 SMO SM0125R POPPR V23 SLI KWANG VTU V298 SXC SLI KWANG VTU V298 SXC SLI KWANG VTU V298 SADDE V107 SMO SM0125R POPPR V23 SLI KWANG CMA VNY V186 ELMOO KWANG VTU V299 SADDE V107 SMO KWANG CMA VNY V186 ELMOO KWANG CMA VNY V186 DARTS HENER FIM V186 DARTS KWANG CMA VNY V186 V264 POM HENER V186 FIM V186 V264 POM KWANG CMA VNY V186 PDZ HENER FIM V186 V264 POM V197 PDZ KWANG CMA VNY V186 PDZ V186 WESIN HENER V186 W264 POM V197 PDZ V186 WESIN KWANG CMA VNY V186 PDZ PDZO78R EDITS	PQ50 PQ50 PQ50 J110M90 JM70PQ50 PQ50 PQ50 J110M90 PQ50 JM10PQ50 JM70PQ50 PQ50 JM70 PQ50 JM70 PQ50 JM70 PQ50 JM70 PQ50
FROM: SBA 10: BUR WHP VNY BUR VNY AVX FUL LGB SLI TOA  SNA	SBAN1 SBAN2 SBAN3 SBAN4 SBAN5 SBAN6 SBAN7 SBAN8 SBAN9 SBAN10 SBAN11 SBAN12 SBAN13 SBAN14 SBAN15 SBAN16 SBAN15 SBAN16 SBAN17 SBAN18 SBAN18	KWANG CMA CMA078R TOAKS KWANG CMA CMA072R GINNA HENER V186 FIM FERNANDO STAR KWANG VTU V208 SXC KWANG CMA VNY V186 ADAMM V394 SLI KWANG CMA VNY V186 BAYJY V363 POXKU V8 SLI KWANG VTU V299 SADDE V107 SMO SM0125R P0PPR V23 SLI KWANG VTU V299 SADDE V107 SMO SM0125R P0PPR V23 SLI KWANG VTU V299 SADDE V107 SMO KWANG VTU V299 SADDE V107 SMO KWANG VTU V299 SADDE V107 SMO KWANG VTU V29 SADDE V107 SMO KWANG VTU V298 SADDE V107 SMO KWANG CMA VNY V186 PARTS HENER FIM V186 DARTS HENER FIM V186 FIM V186 V264 POM HENER V186 FIM V186 V264 POM KWANG CMA VNY V186 PDZ HENER FIM V186 V264 POM V197 PDZ KWANG CMA VNY V186 PDZ V186 WESIN HENER V186 V264 POM V197 PDZ V186 WESIN KWANG CMA VNY V186 PDZ PDZ078R	PQ50 PQ50 JJ110M90 JM70PQ50 PQ50 PQ50 PQ50 JJ110M90 PQ50 JM10PQ50 JM70PQ50 JJ10M90 PQ50 JM70 PQ50 JJ110M90 PQ50 JJ110M90 PQ50

<b>T0</b> : F7O	ROUTE ID	ROUTE KWANG CMA VNY V186 PDZ V186	ALTITUDE
F/U	SBAN22		DOEO
F70	SBAN23	NIKKL HENER FIM V186 V264 POM V197 PDZ	PQ50
170	3DAN23	V186 NIKKL	J110M90
CRQ NFG NKX OKB	SBAN24	HENER V186 DARTS V597 OCN	PQ90
CRQ NFG NKX OKB (LAXE)	SBAN25	KWANG CMA VNY V186 ROBNN V458	. 400
		OCN	PQ70
CRQ NFG NKX OKB	SBAN26	KWANG VTU V208 SXC V208 OCN	J110M90
MYF NRS NZY SAN SDM SEE	SBAN27	HENER V186 DARTS V597 MZB	PQ90
MYF NRS NZY SAN SDM SEE (LAXE)	SBAN28	KWANG CMA VNY V186 HAILE V66	
		MZB	PQ70
MYF NRS NZY SAN SDM SEE	SBAN29	KWANG VTU V208 SXC V208 LAX118R	
		CARDI MZB320R MZB	J110M90
SAN (SANE)	SBAN30	KWANG CMA VNY V186 BAYJY V363	
		DANAH V165 SARGS	PQ50
SAN (SANE)	SBAN31	KWANG VTU V208 SXC V27 REDIN V165	
D.114	004400	SARGS	J110M90
RNM	SBAN32	HENER V186 DARTS V597 OCN V208	
DNM (LAVE)	CDANICO	JLIKWANG CMA VNY V186 ROBNN V208	PQ90
RNM (LAXE)	SBAN33		DO70
RNM	SBAN34	JLI KWANG VTU V208 JLI	PQ70 J110M90
OXR CMA NTD	SBAN35	KWANG CMA	JMPQ30
PSP UDD TRM	SBAN36	FIM V186 NIKKL V64 TRM PSP	PQ110
7 9.7 9.5 7 11	02/11/00	1200 10	. 4110
SANTA BARBARA AREA			
FROM: SBP SMX VBG LPC IZA			
TO:	ROUTE ID	ROUTE	ALTITUDE
BUR VNY WHP	SBAN37	RZS V186 FIM	PQ70
BUR VNY	SBAN38	RZS V386 FIM FERNANDO STAR	J110M90
AVX	SBAN39	RZS VTU V208 SXC	JMPQ70
FUL LGB SLI TOASNA	SBAN40 SBAN41	RZS V186 ADAMM V394 SLI RZS V186 BAYJY V363 POXKU V8 SLI	PQ70
HHR	SBAN42	RZS VTU V299 SADDE V107 SMO	PQ70
11111	SDAN42	SM0125R POPPR V23 SLI	PQ70
FUL LGB SLI TOA SNA HHR	SBAN43	RZS VTU V208 SXC SLI	J110M90
HHR (LAXE)	SBAN44	RZS V186 ELMO0	PQ70
LAX	SBAN45	RZS VTU SADDE STAR	JM110PQ70
LAX (LAXE)	SBAN46	RZS VTU V25 EXERT	JM70PQ50
SMO	SBAN47	RZS V186 DARTS	PQ70
SMO	SBAN48	RZS V386 FIM V186 DARTS	J110M90
CCB	SBAN49	RZS V186 V264 POM	PQ70
CCB	SBAN50	RZS V386 FIM V186 V264 POM	J110M90
CNO EMT REI L65 AJO POC ONT RAL RIR RIV SBD	CDANE1	RZS V186 PDZ	DO70
CNO EMT REI L65 AJO POC ONT RAL RIR	SBAN51	RZS V180 PDZ	PQ70
RIV SBD	SBAN52	RZS V386 FIM V186 V264 POM V197	
WY ODD	OBMINOZ	PDZ	J110M90
HMT	SBAN53	RZS V186 PDZ V186 WESIN	PQ70
HMT	SBAN54	RZS V386 FIM V186 V264 POM V197	
		PDZ V186 WESIN	J110M90
L67	SBAN55	RZS V186 PDZ PDZ078R EDITS	PQ70
L67	SBAN56	RZS V386 FIM V186 V264 POM V197	
		PDZ PDZ078R EDITS	J110M90
F70	SBAN57	RZS V186 PDZ V186 NIKKL	PQ70
F70	SBAN58	RZS V386 FIM V186 V264 POM V197	
		PDZ V186 NIKKL	J110M90
CRQ NFG NKX OKB	SBAN59	RZS V597 OCN	PQ90
CRQ NFG NKX OKB (LAXE)	SBAN60	RZS V186 ROBNN V458 OCN	PQ70
CRQ NFG NKX OKB	SBAN61	RZS VTU V208 SXC V208 OCN RZS V597 MZB	J110M90
MYF NRS NZY SAN SDM SEE MYF NRS NZY SAN SDM SEE (LAXE)	SBAN62 SBAN63	RZS V186 HAILE V66 MZB	PQ90 PQ70
MYF NRS NZY SAN SDM SEE (LAXE)	SBAN64	RZS VTU V208 SXC V208 LAX118R	1010
AND HET OAR ODIN DEE	05/11/04	CARDI MZB320R MZB	J110M90
SAN (SANE)	SBAN65	RZS V186 VNY V186 BAYJY V363	3110/1100
, , , , , , , , , , , , , , , , , , , ,		DANAH V165 SARGS	PQ70
SAN (SANE)	SBAN66	RZS VTU V208 SXC V27 REDIN V165	
•		SARGS	J110M90
RNM	SBAN67	RZS V597 OCN V208 JLI	PQ90

## TOWER ENROUTE CONTROL

T0:         ROUTE ID         ROUTE           RNM (LAXE)         SBAN68         RZS V186 ROBNN V208 JLI	ALTITUDE PQ70 J110M90 JMPQ70 PQ110
FOF	rQIIO
PALM SPRINGS AREA	
FROM: PSP UDD TRM	
TO: ROUTE ID ROUTE	ALTITUDE
BUR VNY WHP PSPN1 V388 PDZ V186 VNY	PQ100
BUR VNY WHP PSPN2 V388 PDZ V197 POM V264 V186 VNY	JM120
AJO CNO RAL RIR ONT RIV SBD PSPN3 V388 PDZ	JM120PQ100
HMT PSPN4 V388 PDZ V186 WESIN	JM120PQ100
EMT POC CCB	JM120PQ100
L67 PSPN6 V388 PDZ PDZ078R EDITS	JM120PQ100
F70 PSPN7 V388 PDZ V186 NIKKL	JM120PQ100
FUL LGB SLI TOA SNA PSPN8 V388 ACINS V283 SLI	JM120PQ100
HHR PSPN9 V388 PDZ PDZ270R HHR RY25 LOC	JM120PQ100
LAX PSPN10A V388 PDZ V16 LAHAB	M120PQ100
LAX PSPN10B V388 LENHO SEAVU SEAVU ARRIVAL	J120
LAX (LAXE) PSPN11 V388 PDZ PDZ270R V394 SLI V8	
TANDY	PQ100
LAX (LAXE)	JM120
SMO	JM120PQ100
CMA OXR NTD PSPN14 V388 PDZ V186 FIM	PQ100
CMA OXR NTD	JM120
SBA	PQ100
SBA	
DEANO V27 KWANG	M120
PALMDALE AREA	
FROM: EDW LOO MHV PMD WJF	
TO: ROUTE ID ROUTE	ALTITUDE
HHR EDWN1 PMD V518 KIMMO V459 DARTS V186	
ADAMM V394 HHR RY25 LOC	JMPQ80
FUL LGB SLI SNA TOA EDWN2 PMD V201 BERRI V459 SLI	J 200
	JMPQ90

## HIGH ALTITUDE REDESIGN (HAR) PHASE 1 RNAV ROUTING

## **RNAV Routing Pitch and Catch Points**

The purpose of this section of the Special High Altitude Routes is to present user routing options for flight within the initial HAR Phase I expansion airspace. Users are able to fly user-preferred routes, referred to as non-restrictive routing (NRR), between specific fixes described by pitch (entry into) and catch (exit out of) fixes in the HAR airspace. Pitch points indicate an end of departure procedures, preferred IFR routings, or other established routing programs where a flight can begin a segment of NRR. The catch point indicates where a flight ends a segment of NRR and joins published arrival procedures, preferred IFR routing, or other established routing programs.

The HAR Phase I expansion airspace is defined as that airspace at and above FL 350 in fourteen of the western and southern Air Route Traffic Control Centers (ARTCCs). The airspace includes Minneapolis (ZMP), Chicago (ZAU), Kansas City (ZKC), Denver (ZDV), Salt Lake City (ZLC), Oakland (ZOA), Seattle Centers (ZSE), Los Angeles (ZLA), Albuquerque (ZAB), Fort Worth (ZFW), Memphis (ZME), and Houston (ZHU). Jacksonville (ZJX) and Miami (ZMA) are included for east-west routes only.

To develop a flight plan, select pitch and catch points based upon your desired route across the Phase I airspace. Filing requirements to pitch points, and from catch points, remain unchanged from current procedures. For the portion of the route between the pitch and catch points, non-restrictive routing is permitted.

Where pitch points for a specific airport are not identified, aircraft should file an appropriate departure procedure (DP), or any other user preferred routing prior to the NRR portion of their routing. Where catch points for a specific airport are not identified aircraft should file, after the NRR portion of their routing, an appropriate arrival procedure or other user preferred routing to their destination.

Additionally, information concerning the location and schedule of Special Use Airspace (SUA) and Air Traffic Control Assigned Airspace (ATCAA) can be found on the Web Site: http://sua.faa.gov/sua/Welcome.do. ATCAA refers to airspace in the high altitude structure supporting military and other special operations. Users are encouraged to file around these areas when they are scheduled to be active, thereby avoiding unplanned reroutes around them.

In conjunction with the HAR program RNAV routes have been established to provide for a systematic flow of air traffic in specific portions of the enroute flight environment. The designator for these RNAV routes begin with the letter Q, for example, Q-501. Where those routes aid in the efficient orderly management of air traffic they will be published as preferred IFR routes.

High Altitude Redesign (HAR) Phase One Expansion Airspace

HAR expansion airspace may pitch vertical pitch line, or at the fixes

Except as noted, flights entering at the airspace boundary, at the

west longitude to the ZHU southern boundary. 90 degrees west longitude, the 90 degrees south to the ZHU boundary. Then west to except between PMM and GSH, then boundary to the ZME/ZID boundary, west longitude from the ZMP/ZAU following the ZME east boundary Vertical Pitch Line: 86 degrees No westbound traffic between PMM and GSH. ZNZ ZBW ZDC ZNZ ZIMA ZOB ZXX DFLM BSH Sovido Boydo W 98 W 06 GEP CESNA ZME る listed on the following page. ZKC ZHD ZFW ZMP ZDV ZAB ZLC ZLA ZSE ZOA

SW, 17 DEC 2009 to 11 FEB 2010

## HAR Special High Altitude Pitch (entry) Points for Nonrestrictive Routing for Airports Located Outside HAR Phase I Expansion Airspace

Westbound traffic originating outside of HAR airspace entering ZMP, ZAU, ZKC and ZME can begin non-restrictive routing over any of the following pitch points (listed from north to south):

DLH, CESNA, GEP, BAE, MKG, GRR, PMM, GSH, CADIZ, FWA, VHP, FLM, IIU, PXV, SGF, RZC, BNA, SALMS, VUZ, BOYDD, MIF

Traffic originating outside of HAR airspace may also begin Nonrestrictive Routing upon crossing the pitch line depicted on the associated graphic.

## HAR Special High Altitude Pitch Points for Airports Located Within (below) HAR Phase I Expansion Airspace

This section lists pitch points for airports within the HAR Phase I expansion airspace.

Albuquerque ABQ, GUP, HANOS or ZUN

Austin ABI, FUZ, JCT, MQP, NAVYS, SJT or TNV

Boca Raton, FL TBIRD KPASA Q118 LENIE

or

TBIRD KPASA Q116 CEEYA or TBIRD KPASA Q110 FEONA or TBIRD SMELZ Q106 BULZI

or TBIRD SMELZ Q106 GADAY

Burbank includes GMN, MARKS

Santa Monica

and Van Nuys DAG LAS

HEC EED

or PMD BLH

Chicago Terminal Area IOW, PLL275065, MZV or BAE

Dallas/Fort Worth Terminal Area ABI, LBB, GTH, CDS, MRMAC, IRW, TUL, MLC, TXK

ELD, SWB

or

Aircraft destined the Chicago terminal area

Except MDW

EAKER MIDEE BDF BRADFORD-STAR

or

MLC J105 SGF BDF BRADFORD-STAR

Denver Terminal Area PUB, DVC, DBL, RLG, EKR, LAR, MBW, CYS, BFF, HANKI, NATTI, ASHBY, BELKE,

CABET, WEEDS, OR BINKE

Fort Lauderdale (or) THNDR KPASA Q118 LENIE

Fort Lauderdale Executive

THNDR KPASA Q116 CEEYA

or

THNDR KPASA Q110 FEONA

or

THNDR SMELZ Q106 GADAY

THNDR SMELZ Q106 BULZI

Houston Bush LIT, EMG, MLC, JCT

or

Aircraft destined Atlanta Terminal Area LCH Q24 PAYTN HONIE-RNAV STAR

or

Aircraft joining J37 to the northeast, BPT GUSTI Q22 CATLN

or

Aircraft joining J42 to the northeast, ELD Q32 J42

## 368 HIGH ALTITUDE REDESIGN (HAR) PHASE 1 RNAV ROUTING

Houston Hobby LIT, EMG, MLC, JCT,

or

Aircraft joining J42 to the northeast, ELD Q32 J42

Jacksonville, FL TAY

Kansas City Terminal Area TIFTO, CATTS or KENTN

Los Angeles, includes GMN, RZS Ontario or

DAG LAS or TRM EED

TRM EED or TRM PKE

Las Vegas DOBNE, MOSBI, NICLE, TRALR or ZELOT

Long Beach includes GMN SNS, EHF, LANDO

Orange County

TRM PKE or

TRM EED

Memphis BNA, HAAWK, SALMS or SQS
Miami Terminal Area WINCO KPASA Q118 LENIE

or WINCO KPASA Q116 CEEYA

or

WINCO KPASA Q110 FEONA

,,

WINCO SMELZ Q106 GADAY

r

WINCO SMELZ Q106 BULZI

Milwaukee GREAS

Minneapolis Terminal Area\* ONL, ABR, FAR, OBH, OVR, FOD

New Orleans Terminal Area AEX, MEI, SQS, KAPLN
Orlando Terminal Area WEBBS BRUTS 0118 LENIE

or WEBBS GULFR Q116 CEEYA

or

WEBBS BULZI Q106 GADAY

or

WEBBS FEONA

or WEBBS BULZI

Palm Beach, FL TBIRD KPASA Q118 LENIE

TBIRD KPASA Q116 CEEYA

or TBIRD KPASA Q110 FEONA

TBIRD SMELZ Q106 BULZI

TBIRD SMELZ Q106 GADAY

Palm Springs TRM JOTNU BLD

TRM EED

TRM PKE

Phoenix CHILY, CIE, CULTS, RSK, DOVEE, GCN, MESSI, SJN, DRYHT or MOHAK

Portland, OR PDT, TIMEE

Salt Lake City HVE, DTA, MLF, BCE, OAL, MTU, BVL, OCS, TWF, DBS, BPI

TCH J56 CHE

TCH J173 EKR

Saint Louis VIH, MAP, MYERZ, MCM

HLV MCI

San Antonio Terminal Area FUZ, SJT, MQP, ABI

Aircraft North of LFK, LFK Aircraft South of HUB, ELA

Aircraft South of LFK and North of HUB LCH

San Diego TRM FFD

or

TRM PKF

TRM JOTNU BLD

San Francisco Bay Area GALLI, INSLO, HAROL JSICA Oakland GALLI, INSLO, HAROL JSICA

San Jose GALLI or INSLO

Seattle BLUIT

Southwest Florida Airports

JOCKS KPASA Q118 LENIE

(RSW/FMY)

JOCKS KPASA 0116 CEEYA JOCKS KPASA Q110 FEONA

JOCKS SMELZ Q106 GADAY

JOCKS SMELZ Q106 BULZI

Tampa Terminal Area FEONA, BULZI

**BRUTS 0118 LENIE** 

or

**GULFR Q116 CEEYA** or BULZI Q106 GADAY

## Catch Points for Airports Located Outside HAR Phase I Expansion Airspace

This section lists exit points for aircraft destined to specific destinations which are outside the HAR Phase I airspace.

Atlanta Terminal Area

Aircraft through ZME airspace from ZKC airspace east of FAM, Pless Q19 BNA

Aircraft through ZME airspace from ZKC airspace west of FAM, ARG Q26 DEVAC

MEM

Aircraft through ZME airspace from ZID airspace west of a line from VHP to

Aircraft through ZME airspace from ZID airspace east of a line from VHP to

BWG, BWG

Aircraft through ZME airspace from ZFW airspace, MEM

MEI HONIE (RNAV)-STAR

PATYN HONIE (RNAV)-STAR

<sup>\*</sup>MSP area departures with destinations east of 93 degrees west longitude via preferred IFR routing.

## 370 HIGH ALTITUDE REDESIGN (HAR) PHASE 1 RNAV ROUTING

Baltimore–Washington\* GIJ, GEP, FLM, IIU, BAE, VHP, WHETT, BNA or VUZ

Boston\* GEP, CRL, ECK, IIU, BNA or VUZ

Buffalo\* GEP, CRL
Hartford Bradley\* GEP, CRL
Canton-Akron\* GIJ, VHP, GEP
Charlotte BNA, VUZ
Cincinnati Terminal Area BNA, PXV

BNA, PXV

Aircraft north of SLC, JOT

AI

Aircraft over or south of SLC, ENL

or

SLC or SFO departures, ENL, JOT

Cleveland Terminal Area\* OBK

Detroit Terminal Area BAE MKG POLAR-STAR

or

VHP FWA MIZAR-STAR

Detroit Young VHP FWA

or

LAN SPRTN-STAR

Indianapolis Terminal Area BIB, SPI, JOT
Louisville ENL. MEM

Newark\* GEP, VHP, FLM, IIU, BNA, VUZ

or

IOW GIJ J554 CRL J584 SLT FQM

New York Kennedy\* GEP, VHP, FLM, IIU, BNA, VUZ

or

DBQ J94 PMM J70 LVZ LENDY-STAR

New York LaGuardia\* GIJ, GEP, VHP, BAE, FLM, IIU, BNA, VUZ
Philadelphia Terminal Area\* GIJ, GEP, VHP, BAE, WHETT, BNA, VUZ

Pittsburgh Terminal Area\* VHP, GIJ, BAE, GEP
Pontiac LFD, LAN, VHP, FWA, GEP

Providence JHW, HEMDI, CESNA, GEP, GRB, TVC, ASP, VHP, IIU, BNA, VUZ

 Raleigh-Durham
 FLM, IIU, BNA, VUZ

 Toronto Terminal Area
 ECK, SVM, SSM, GEP

 Teterboro\*
 GEP, VHP, CRL, BNA, VUZ

Washington Dulles/National\* GIJ, GEP, FLM, IIU, BAE, VHP, WHETT, BNA, VUZ

White Plains\* GEP, VHP, CRL, FLM, IIU, BNA, VUZ

Willow Run\* LAN, LFD, VHP, FWA, GEP

\*Eastbound aircraft over flying ZMP center airspace entering Toronto center airspace, file direct SSM or via J63, J522, Q505, Q504, Q502, Q501

or

Entering ZAU or ZOB airspace from north of DPR J16 MCW, GEP

or

Entering ZAU or ZOB airspace from or south of DPR J16 MCW, CRL.

## HIGH ALTITUDE REDESIGN (HAR) PHASE 1 RNAV ROUTING

## Catch Points for Airports Located Within (below) HAR Phase I Expansion Airspace

This section lists exit points for aircraft destined to airports which are below HAR Phase I airspace.

Albuquerque Terminal Area CURLY CURLY-STAR

ESPAN FRIHO-STAR

LAVAN LAVAN-STAR

FTI FRIHO-STAR

MIERA MIERA-STAR

Austin Terminal Area Aircraft west of a north-south line at LFK, BLEWE

Aircraft east of a north-south line at LFK,IDU

LLO

Boca Raton, FL CEW DEFUN Q112 INPIN SHDAY (RNAV)-STAR

Aircraft through ZHU remain south of ZME and ZTL airspace

DEFUN 0112 INPIN SHDAY (RNAV)-STAR

Aircraft through ZHU remain south of ZME and ZTL airspace

SZW INPIN SHDAY (RNAV)-STAR

Chicago Midway CVA MOTIF-STAR

PIA MOTIF-STAR

DBQ CVA MOTIF-STAR

LMN MOTIF-STAR

Chicago O'Hare Terminal Area GEP DLL MSN JVL JANESVILLE-STAR

TVC PULLMAN-STAR

FOD DBQ JVL JANESVILLE-STAR

MCW JANESVILLE-STAR

GCK IRK BRADFORD-STAR

Dallas/Fort Worth Terminal Area IRW, LOSZY, FSM, LIT, SQS, MLU, AEX, JUMBO, TQA, TURKI, HEATR

Aircraft through ZME airspace from north and west of PXV, RZC, Q23 FSM

Aircraft through ZME airspace from east of PXV, PXV Q25 MEEOW

Aircraft through ZME airspace from J6 down to, but not including J52, LIT, SQS

Aircraft through ZME airspace from J52 and south of J52, SQS

Denver Terminal Area OATHE DANDD-STAR

HGO QUAIL-STAR

LOPEC-STAR

ALS LARKS-STAR

HBU POWDR-STAR

EKR TOMSN-STAR

CHE TOMSN-STAR

BFF LANDR-STAR

LBF SAYGE-STAR

HCT SAYGE-STAR

RSK LARKS-STAR

LAA QUAIL-STAR

GCK J154 RYLIE DANDD-STAR OCS J154 ALPOE RAMMS-STAR

YANKI J114 SNY LANDR-STAR

Aircraft filed BIL or east, MBW RAMMS-STAR

Ft Lauderdale or CEW DEFUN Q104 PIE SWAGS (RNAV)-STAR

Ft Lauderdale Executive Aircraft through ZHU airspace remain south ZME and ZTL

airspace

SZW HEVVN 0104 PIE SWAGS (RNAV)-STAR

Houston Bush CRP. CVE. LLO. LUKIY. SAT

Aircraft south and east of LLA, LLA

MISLE Q40 AEX

Aircraft north and east of SJI, SJI

Aircraft east of PXV. PXV 031 DHART SWB

Aircraft north and west of PXV, PROWL Q33 DHART SWB

Houston Hobby CRP, ELLVR, SAT, SWB

or

Aircraft south and east of GIRLY, GIRLY

Aircraft north and east of SJI, SJI

BESOM Q38 ROKIT ROKIT-STAR

Aircraft east of PXV, PXV Q29 HARES SWB

Aircraft north and west of PXV, PROWL Q33 DHART SWB

Jacksonville **GADAY ZOOSS TAY** 

Aircraft through ZHU airspace remain south of ZME and ZTL

airspace

**ZOOSS TAY** 

John Wavne-Orange County HEC. PGS. BLD

Aircraft south of TBC from ZAB airspace, HIPPI

Kansas City Terminal Area LMN BRAYMER-STAR

PWE ROBINSON-STAR

EMP JHAWK-STAR

DILCO, LIDAT, IGM Las Vegas

Aircraft over PGA or north of PGA KSINO

Aircraft south of PGA, PGS, LYNSY

Los Angeles Terminal Area Aircraft North of TBC, HEC, PGS

Aircraft South of TBC from ZAB airspace, HIPPI.

MESSI

CEW DEFUN Q104 CYY DEEDS (RNAV)-STAR Miami Terminal Area

Aircraft through ZHU airspace remain south ZME and ZTL airspace

SZW HEVVN Q104 CYY DEEDS (RNAV)-STAR

Minneapolis Terminal Area Aircraft from north, west, south,

FAR GOPHER-STAR

RWF SKETR-STAR or ALO KASPR-STAR

BRD GOPHER-STAR

BAE EAU CLAIRE-STAR

FOD TWOLF-STAR ARG, BWG, FSM, PXV, LIT, RZC, SQS, VUZ, BNA, GQO, ELD

Naples, FL CEW DEFUN 0104 PLYER PIKKR (RNAV)-STAR

Aircraft through ZHU AIRSPACE remain south of ZME and ZTL

airspace

SZW HEVVN 0104 PLYER PIKKR (RNAV)-STAR

Nashville CCT, GHM, GUITR, TINGS, VOLLS New Orleans Terminal Area BLUEZ, GPT, LCH, MCB, TBD, FATSO

Oakland II A

Memphis Terminal Area

KATTS PAMMY

Aircraft over or south of a line ILC J16 DVC

REANA KATTS PAMMY

Aircraft from north of ILC, JOPER PAMMY

KATTS PAMMY

Aircraft over or south of ILC, REANA KATTS PAMMY

Orlando Terminal Area GADAY Q108 CLAWZ LEESE-STAR

Aircraft through ZHU airspace remain south of ZME/ZTL

airspace

OTK LEESE-STAR

## 374 HIGH ALTITUDE REDESIGN (HAR) PHASE 1 RNAV ROUTING

Palm Beach, FL CEW DEFUN Q112 INPIN GULLO (RNAV)-STAR

Aircraft through ZHU airspace remain south of ZME and ZTL

airspace

SZW INPIN GULLO (RNAV)-STAR

Phoenix CORKR DRK

or

Aircraft from ZDV airspace,

GUP

Aircraft from ZAB airspace,

ZUN, MOHAK, SSO

or

VYLLA TUS

Phoenix Satellites FLG, SSO, MOHAK

or

VYLLA, TUS

Portland, OR Terminal Area ARNIT BONVL-STAR

LARNO BONVL-STAR

or

MOXEE MOXEE-STAR

St. Louis Terminal Area SGF TRAKE-STAR

or

BUM TRAKE-STAR or

ANX TRAKE-STAR

or

LMN IRK RIVRS-STAR

RBS VANDALIA-STAR

Salt Lake City Terminal Area JNC J12 HELPR SPANE-STAR

or

EKR MTU SPANE-STAR

or

BCE DTA-TCH

or

MLF DTA-TCH

or

BVL BONNEVILLE-STAR or

BYI BEARR-STAR

or

PIH BEARR-STAR

or

DBS BRIGHAM CITY-STAR

or

JAC BRIGHAM CITY-STAR or

BPI BRIGHAM CITY-STAR

or

OCS BRIGHAM CITY-STAR

San Diego Terminal Area EED, LAX, GBN

Santa Ana HEC, PGS, BLD, HIPPI

San Antonio Terminal Area IDU, CSI, JCT, LLO, CRP, LRD

or

West of a north-south line at LFK, BLEWE

or

East of a north-south line at LFK, IDU

San Francisco FMG GOLDEN GATE-STAR

or

MVA MODESTO-STAR

ENI GOLDEN GATE-STAR

or

OAL MODESTO-STAR

or

South of a line ILC to DVC,

REANA KATTS OAL MODESTO-STAR

San Jose FMG HYP EL NIDO-STAR

10

OAL HYP EL NIDO-STAR

or

ENI GOLDEN GATE-STAR

0.5

South of a line ILC to DVC, REANA KATTS KICHI CANDA EL NIDO-STAR

Seattle Terminal Area Aircraft from northeast, southeast, south,

TEMPL GLASR-STAR

or

SUNED CHINS-STAR

or

BTG OLMYPIA-STAR

Southwest Florida Airports CEW DEFUN Q104 SWABE JOSFF-STAR

RSW and FMY Aircraft through ZHU airspace remain south of ZME and ZTL

airspace

or

SZW HEVVN Q104 SWABE JOSFF-STAR

Tampa Terminal Area CEW DEFUN Q104 HEVVN DARBS-STAR

Aircraft through ZHU airspace remain south of ZME and ZTL

airspace

or

SZW DARBS-STAR

Tucson DRK PXR

or

MOHAK GBN

## **VFR WAYPOINTS**

## **VISUAL FLIGHT RULES (VFR) WAYPOINTS**

VFR Waypoint names consist of five letters beginning with "VP". Stand-alone VFR Waypoints are portrayed on VFR Charts using the same four-point star symbol currently used for Instrument Flight Rules (IFR) Waypoints.

VFR Waypoints collocated with Visual Checkpoints (Visual Reporting Points) are portrayed with a Visual Check Point flag. The VFR Waypoint name is shown in parentheses adjacent to the Visual Check Point name.

VFR Waypoint names are not intended to be pronounceable and shall not be used in ATC communications.

CAUTION: GPS accuracy necessitates extra vigilance for other aircraft when navigating near any fix retrieved from a GPS database.

## RAITIMORE-WASHINGTON TERMINAL AREA CHART/FLYWAY CHART

	BALTIMORE-WASHINGTON TERMINAL AREA CHARTA	FLYWAY CHART
WAYPOINT IDENT	COLLOCATED VFR CHECKPOINT	LOCATION
VPAXI		N38°34.57′/W076°20.38′
VPONX		N39°06.65′/W076°55.92′
VPOOP		N38°56.32′/W076°36.90′
		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
	BOSTON HELICOPTER CHART	
VPBAY		N42°16.17'/W070°49.48'
VPBLT		N42°19.67′/W070°53.40′
VPCGS		N42°22.08′/W071°03.13′
VPEVS		N42°23.52′/W071°04.10′
VPFEN		N42°12.58′/W071°08.88′
VPFRE		N42°25.03′/W071°12.32′
VPGVL		N42°21.88′/W070°52.18′
VPHAM		N42°30.13′/W071°07.15′
VPPIK		N42°20.37′/W071°15.93′
VPQUA		N42°12.10′/W071°04.78′
VPQUB		N42°12.60′/W070°59.83′
VPSPF		N42°24.20′/W071°09.47′
VPTOB		N42°31.42′/W070°59.82′
VPWAN		N42°36.88′/W071°19.45′
*******		2 00.00 /1 100
	BOSTON TERMINAL AREA CHART	
VPCOH	Cohasset	N42°13.58′/W070°48.94′
VPCUT	Cuttyhunk Harbor	N41°25.50′/W070°55.03′
VPFRA	Framingham Shopping Center	N42°18.16′/W071°23.65′
VPHOL	Woods Hole	N41°31.06′/W070°40.60′
VPHUL	Hull	N42°18.20′/W070°55.30′
VPLPT	Nantucket Great Point	N41°23.41′/W070°02.78′
VPNED	Needham Towers	N42°18.51′/W071°14.64′
VPPEA	Peabody Shopping Center	N42°32.52′/W070°56.69′
VPROC	Rockingham Race Track	N42°46.29′/W071°13.57′
VPSCI	Scituate	N42°11.89′/W070°43.69′
VPTPT	Nantucket Third Point	N41°18.51′/W070°03.37′
VPTUC	Tuckernuck	N41°18.31′/W070°15.43′
VPWAK	Wakefield	N42°30.72′/W071°05.24′
VPWAN	Wang Towers	N42°36.88'/W071°19.45'
	CHARLOTTE OF CTIONAL CHART	
	CHARLOTTE SECTIONAL CHART	
VPATO		N34°37.37′/W076°31.47′
VPAVA		N34°57.00′/W077°16.50′
VPBFE		N32°16.38′/W080°47.50′
VPBRA		N36°13.75′/W076°08.08′
VPGCE		N36°03.90′/W076°36.42′
VPGHI		N35°15.30′/W075°31.25′
VPGIO		N35°32.50′/W076°37.33′
VPKJU		N35°26.58′/W076°10.22′
VPLMN		N34°55.43′/W077°46.42′
VPMAB		N34°42.20′/W077°03.50′
VPNPO	ISLE OF PALMS	N32°47.78′/W079°46.45′
VPOKY		N35°06.53′/W075°59.17′
VPREP		N32°33.98′/W080°21.82′
VPRRS		N33°25.45′/W079°07.60′
VPUMO		N35°35.63′/W075°28.08′
VPWZO		N36°00.87′/W075°40.07′
VPZIE		N32°01.62′/W080°53.42′

## CHICAGO SECTIONAL CHART

CHICAGO SECTIONAL CHART			
WAYPOINT IDENT VPCOH	COLLOCATED VFR CHECKPOINT	<b>LOCATION</b> N31°49.35′/W081°51.07′	
DENVER TERMINAL AREA CHART/FLYWAY CHART			
VPBEN		N39°44.28′/W104°26.00′	
VPFTG		N39°44.35′/W104°32.75′	
VPNIC	NORTH INTERCHANGE	N39°58.90′/W104°59.27′	
	HOUSTON TERMINAL AREA CHART/FL	YWAY CHART	
WAYPOINT IDENT	COLLOCATED VFR CHECKPOINT	LOCATION	
VPBWY		N29°46.25′/W095°09.24′	
VPDTN		N29°46.59′/W095°22.01′	
VPGLA		N30°08.32′/W095°06.62′	
VPGLB		N30°07.80′/W094°55.70′	
VPKTY		N29°47.05′/W095°44.92′	
VPPLN		N30°08.80′/W095°50.42′	
VPRSN		N29°30.00′/W095°41.00′	
VPSND		N29°23.13′/W095°28.86′	
VPSNT		N29°49.29′/W094°53.94′	
VPTNE	<del></del>	N29°47.48′/W095°03.34′	
VPTNW	<del></del>	N29°47.06′/W095°33.81′	
VPTRK		N29°24.06′/W095°10.44′	
	JACKSONVILLE SECTIONAL C	HART	
VPAFI		N31°49.35′/W081°51.07′	
VPAFY		N30°07.00′/W081°21.33′	
VPBEC		N29°46.25′/W081°15.10′	
VPCJA		N29°30.00′/W081°06.00′	
VPCKY		N28°46.50′/W082°34.00′	
VPCNY		N28°30.00′/W080°45.00′	
VPDAD	DADE CITY	N28°22.57′/W082°11.25′	
VPDAR		N31°22.38′/W081°24.13′	
VPDFI		N29°00.17′/W081°20.85′	
VPDUT		N27°37.70′/W082°09.10′	
VPEAR	CLEARWATER BEACH	N27°58.67′/W082°49.83′	
VPEGV		N29°39.97′/W081°24.87′	
VPFFU		N28°57.08′/W081°00.33′	
VPGPE	ST PETE BEACH	N27°43.50′/W082°44.67′	
VPHAA	01 1 E1E BENON	N30°04.02′/W083°40.02′	
VPHUC		N28°19.87′/W082°43.77′	
VPIWA	MIDWAY	N31°48.33′/W081°25.85′	
VPJMY		N29°26.92′/W081°18.27′	
VPKER	LAKE PARKER	N28°04.00′/W081°56.00′	
VPLEV		N28°48.00′/W080°52.00′	
VPLJA		N29°00.00′/W080°51.00′	
VPMAI		N30°50.02′/W084°56.63′	
VPTLH		N30°32.70′/W083°52.22′	
VPXZY		N29°35.00′/W083°10.00′	
VPYIW		N30°42.28′/W081°27.25′	
VPZIE		N32°01.62′/W080°53.42′	
KANSAS CITY SECTIONAL CHART			
VPAGO		N37°50.33′/W090°29.03′	
VPBEK		N37°15.07′/W092°30.67′	
VPDEN		N37°46.75′/W092°19.20′	
VPENE		N37°44.75′/W091°55.78′	
VPESS		N36°59.48′/W091°00.88′	
VPFME		N37°41.00′/W092°38.33′	
VPGXY		N37°15.50′/W091°40.17′	
VPMBE	<del></del>	N37°11.08′/W090°27.92′	
VPMKE	<del></del>	N37°11.08′/W090°27.92 N37°24.47′/W092°40.00′	
VPROV		N38°01.72′/W091°12.81′	
VPUTT	<del></del>	N37°52.05′/W092°01.20′	
*1 011	<del></del>	1437 32.03 / 44032 01.20	

## 378 VFR WAYPOINTS

WAYPOINT IDENT VPWOC	COLLOCATED VFR CHECKPOINT	<b>LOCATION</b> N37°18.03'/W092°18.63'
VPWRO VPXIZ		N37°39.12′/W091°45.68′ N37°26.60′/W092°05.42′
VIAL	KANSAS CITY TERMINAL ARE	
VDATA		
VPATN VPBGS	ATCHISON BLUE SPRINGS	N39°33.62′/W095°07.65′ N39°01.82′/W094°16.32′
VPBSP	BONNER SPRINGS	N39°03.78′/W094°53.10′ N39°08.77′/W094°32.03′
VPCHB VPDS0	CHOUTEAU BRIDGE DE SOTO	N38°58.68′/W094°58.48′
VPESG	EXCELSIOR SPRINGS	N39°20.68′/W094°13.77′
VPGTB	GARRETSBURG	N39°40.92′/W094°41.45′
VPLAT	LATHROP WATER TANK	N39°32.87′/W094°20.00′
VPLEN	LENEXA	N38°57.77′/W094°43.68′
VPLVL	LONGVIEW LAKE	N38°54.63′/W094°28.28′
VPMCL	MC LOUTH	N39°11.65′/W095°12.50′
VPNHA	NASHUA	N39°17.83′/W094°34.80′
VPSCX	SPORTS COMPLEX	N39°03.00′/W094°29.02′
VPSKR	SUGAR CREEK REFINERY	N39°07.00′/W094°27.02′
VPSPK	SWOPE PARK	N39°00.47′/W094°31.93′
VPTSK	TWIN STACKS	N39°09.05′/W094°38.22′
VPWOF	WORLDS OF FUN	N39°10.42′/W094°29.12′
	KLAMATH FALLS SECTION	CHART
VPORO		N43°57.38′/W123°02.22′
	LOS ANGELES HELICOPTER	CHART
VDANIA	EGO ANGELEO NELIGOT TEN	
VPANA VPART	MAGNOLIA	N33°44.43′/W117°50.03′ N33°51.45′/W117°58.92′
VPAUT	HWY 91 & 55	N33°50.63′/W117°49.57′
VPBOB	11W1 31 & 33	N33°59.60′/W117°21.45′
VPCAR	<del></del>	N33°49.90′/W118°17.23′
VPCNG	CONEJO GRADE US HWY 101	N34°12.54′/W118°59.61′
VPCOR		N33°52.90′/W117°32.95′
VPCRX		N34°01.40′/W117°44.88′
VPCSU	CSU CHANNEL ISLANDS	N34°09.76′/W119°02.53′
VPDOW		N33°56.47′/W118°05.80′
VPELA		N34°00.98′/W118°10.35′
VPETY		N33°38.70′/W117°44.12′
VPFCB		N34°02.03′/W118°01.63′
VPFPL	OXNARD FINANCIAL PLAZA	N34°13.71′/W119°10.39′
VPGOL		N34°09.33′/W118°17.37′
VPIMP		N33°55.85′/W118°16.85′
VPKAT	<del></del>	N33°48.23′/W117°54.22′
VPKEL		N34°03.92′/W117°48.40′
VPLAC	<del></del>	N34°03.75′/W118°14.93′
VPLLU	OHEEN MARY	N34°03.85′/W117°17.82′
VPLQM VPLRT	QUEEN MARY SANTA ANITA RACE TRACK	N33°45.17'/W118°11.37' N34°08.45'/W118°02.65'
VPLVT	VINCENT THOMAS BRIDGE	N33°44.97′/W118°16.32′
VPMDR	VINOLINI TITOMAS BRIDGE	N33°59.27′/W118°23.97′
VPNEW	NEWHALL PASS	N34°20.18′/W118°30.72′
VPNUY		N34°09.63′/W118°28.18′
VPPCH		N33°28.07′/W117°40.32′
VPPKC		N34°03.32′/W118°12.83′
VPPOR		N34°00.10′/W117°50.12′
VPRRT		N33°59.37′/W118°16.83′
VPSEP		N34°05.80′/W118°28.63′
VPSFR		N34°17.45′/W118°28.07′
VPSTC	SATICOY BRIDGE	N34°16.62′/W119°08.34′
VPSTK		N34°13.97′/W118°24.60′

	LOS ANGELES SECTIONAL C	HART
WAYPOINT IDENT	COLLOCATED VFR CHECKPOINT	LOCATION
VPCNG	CONEJO GRADE US HWY 101	N34°12.54′/W118°59.61′
VPCSU	CSU CHANNEL ISLANDS	N34°09.76′/W119°02.53′
VPFPL	OXNARD FINANCIAL PLAZA	N34°13.71′/W119°10.39′
VPSTC	SATICOY BRIDGE	N34 13.71 /W119 10.39 N34°16.62′/W119°08.34′
VESTO		
	LOS ANGELES TERMINAL AREA CHART	
VPCNG	CONEJO GRADE US HWY 101	N34°12.54′/W118°59.61′
VPCSU	CSU CHANNEL ISLANDS	N34°09.76′/W119°02.53′
VPGTY	GETTY CENTER	N34°04.84′/W118°28.66′
VPLBP	BANNING PASS	N33°56.05′/W116°59.63′
VPLCC	CHAFFEY COLLEGE	N34°08.87′/W117°34.33′
VPLCP	CAJON PASS	N34°18.07′/W117°27.68′
VPLDL	DISNEYLAND	N33°48.72′/W117°55.13′
VPLDP	DANA POINT	N33°27.62′/W117°42.87′
VPLDS	DODGER STADIUM	N34°04.42′/W118°14.42′
VPLFX	91/605 INTERCHANGE	N33°52.38′/W118°06.08′
VPLGP	GRIFFITH PARK OBSERVATORY	N34°07.10′/W118°18.02′
VPLHF	110/405 FWYS	N33°51.42′/W118°17.10′
VPLHP	HUNTINGTON PIER	N33°39.32′/W118°00.25′
VPLKH	KING HARBOR	N33°50.75′/W118°23.88′
VPLLC	L.A. COLISEUM	N34°00.83′/W118°17.27′
VPLLM	LAKE MATHEWS	N33°50.58′/W117°26.85′
VPLMM	MAGIC MOUNTAIN	N34°26.20′/W118°36.28′
VPLMS VPLPD	MILE SQUARE PARK PRADO DAM	N33°43.40′/W117°56.77′ N33°53.40′/W117°38.48′
VPLPD	PACIFIC PALISADES	N34°02.13′/W118°32.15′
VPLQM	OUEEN MARY	N33°45.17′/W118°11.37′
VPLRB	ROSE BOWL	N34°09.67′/W118°10.05′
VPLRT	SANTA ANITA RACE TRACK	N34°08.45′/W118°02.65′
VPLSA	SANTA ANA CANYON	N33°52.03′/W117°42.68′
VPLSB	SANTA FE FLOOD BASIN	N34°07.72′/W117°57.30′
VPLSC	STATE COLLEGE	N33°52.97′/W117°53.13′
VPLSF	SAN FERNANDO RESERVOIR	N34°17.87′/W118°29.00′
VPLSP	SIGNAL PEAK	N33°36.33′/W117°48.63′
VPLSR	HAWTHORNE & 405 FREEWAY	N33°53.07′/W118°21.13′
VPLSS	SANTA SUSANA PASS	N34°16.00′/W118°38.43′
VPLTW	TUJUNGA WASH & FOOTHILL	N34°16.40′/W118°20.30′
VPLVT	VINCENT THOMAS BRIDGE	N33°44.97′/W118°16.32′
VPLWT	WATER TANK	N34°10.82′/W118°46.27′
VPNEW	NEWHALL PASS	N34°20.18′/W118°30.72′
VPSTC	SATICOY BRIDGE	N34°16.62′/W119°08.34′
	MIAMI SECTIONAL CHAR	RT
VPACH	HOLLYWOOD BEACH	N26°00.92′/W080°06.93′
VPBOV		N27°57.00′/W080°46.75′
VPCLE		N26°27.07′/W082°00.88′
VPCTE		N26°09.28′/W081°20.70′
VPDAD	DADE CITY	N28°22.57′/W082°11.25′
VPDUT		N27°37.70′/W082°09.10′
VPDZE		N27°19.00′/W080°44.17′
VPEAR	CLEARWATER BEACH	N27°58.67′/W082°49.83′
VPEDY	ANDYTOWN TOLLGATE	N26°08.78′/W080°28.00′
VPFAH		N26°25.40′/W081°29.67′
VPGPE	ST PETE BEACH	N27°43.50′/W082°44.67′
VPHRO		N27°05.97′/W082°12.20′
VPHUC		N28°19.87′/W082°43.77′
VPIBR		N27°12.47′/W081°40.22′
VPKER	I AKE DARKER	N28°04 00' /W081°56 00'

## SW, 17 DEC 2009 to 11 FEB 2010

N28°04.00'/W081°56.00'

N24°40.08'/W081°20.55'

N24°49.07'/W080°49.17'

N25°58.57'/W080°08.17'

N26°28.30′/W080°26.75′

N25°50.67'/W080°55.18'

N25°22.92'/W080°36.58'

N27°03.00'/W080°35.00'

LAKE PARKER

GULFSTREAM PARK

PUMPING STATION

RANGER STATION

**VPKER** 

VPKOE

VPLYY

VPMBO

VPOBA

**VPRBI** 

**VPRNL** 

VPWMO

VPEOX

## MIAMI TERMINAL AREA CHART/FLYWAY CHART

	MIAMI TERMINAL AREA CHARI/FL	YWAY CHARI
WAYPOINT IDENT	COLLOCATED VFR CHECKPOINT	LOCATION
VPACH	HOLLYWOOD BEACH	N26°00.92′/W080°06.93′
VPEDY	ANDYTOWN TOLLGATE	N26°08.78′/W080°28.00′
VPMBO	GULFSTREAM PARK	N25°58.57′W080°08.17′
VPOBA	PUMPING STATION	N26°28.30′/W080°26.75′
VPRBI	Tomi ind divinor	N25°50.67′/W080°55.18′
VPRNL	RANGER STATION	N25°22.92′/W080°36.58′
VERNE	RANGER STATION	N23 22.92 / W080 30.38
	NEW ORLEANS SECTIONAL	CHART
VPGPT		N30°25.95′/W089°05.62′
VPLIP	PHILLIPS INLET	N30°16.23′/W085°59.25′
VPMAI		N30°50.02′/W084°56.63′
VPMOB		N30°23.00′/W088°31.72′
VPRAM		N30°18.95′/W089°35.88′
VPRER		N30°13.87'/W085°20.67'
VPRIV		N30°54.85′/W087°57.82′
VPSAW		N30°49.65′/W089°07.42′
VPTHR		N30°19.93′/W087°08.50′
	NEW YORK HELICOPTER C	HART
VPJAY		N40°59.00′/W073°07.00′
VPLYD		N40°57.37′/W073°29.59′
VPROK		N40 57.37 /W073 29.39 N40°52.70′/W073°44.24′
VPRUK		N40 52.70 / W073 44.24
	PHOENIX TERMINAL AREA CHART/F	LYWAY CHART
VPALL	ALLENVILLE	N33°20.97′/W112°35.20′
VPAQU	AQUEDUCT PUMPING STATION	N33°40.05′/W112°41.38′
VPARM	ARROWHEAD MALL	N33°38.52′/W112°13.48′
VPAWG	AHWATUKEE GOLF COURSE	N33°19.98′/W111°59.08′
VPAZM	ARIZONA MILLS	N33°23.43′/W111°57.88′
VPBAR	BARTLETT DAM	N33°49.10′/W111°37.92′
VPCCC	COUNTRY CLUB & CANAL	N33°30.73′/W111°50.37′
VPCNL	CANAL	N33°33.23′/W111°46.89°
VPFRB	FIREBIRD LAKE	N33°16.35′/W111°58.10′
VPFTN	FOUNTAIN HILLS	N33°36.12′/W111°42.72′
VPGLX	GILA CROSSING	N33°16.55′/W112°10.08′
VPGPP	GLENDALE POWER PLANT	N33°33.27′/W112°13.00′
VPMAR	MARICOPA	N33°03.42′/W112°02.88′
VPMHS	MESQUITE HIGH SCHOOL	N33°20.53′/W111°49.58′
VPNRV	NEW RIVER	N33°55.08′/W112°08.45′
VPNTT	NORTH TEST TRACK	N33°03.50′/W111°55.83′
VPPIR	PIR	N33°22.52′/W112°18.90′
VPQTR	QUINTERO GOLF COURSE	N33°49.53′/W112°23.58′
VPRVC	RIO VERDE COMMUNITY	N33°44.37′/W111°39.62′
VPSMC	SOUTH MOUNTAIN COLLEGE	N33°23.02′/W112°02.12′
VPSOP	SQUAW PEAK	N33°32.83′/W112°01.27′
VPSSS	SUPERSTITION SPRINGS MALL	N33°23.50′/W111°41.37′
VPSTN	SANTAN MOUNTAINS	N33°09.23′/W111°40.92′
VPSTT	SOUTH TEST TRACK	N32°56.25′/W111°59.67′
VPZZZ	OCCUPATION TO THE OCCUPATION OF THE OCCUPATION OCCUPATION OF THE OCCUPATION	N33°20.18′/W111°26.53′
	ST LOUIS TERMINAL AREA CHART/F	,
VPAGN	TV ANTENNA	N38°32.08′/W090°22.42′
VPBPE		N38°23.80′/W090°20.38′
VPCJY	HOLIDAY SHORES	N38°55.00′/W089°56.00′
VPCOJ	WINFIELD DAM	N39°00.28′/W090°41.23′
VPDFA	JEFFERSON BARRACKS BRIDGE	N38°29.18′/W090°16.47′
VPEAZ	BUSCH STADIUM	N38°37.43′/W090°11.55′
VPEDZ	WATER TANKS	N38°45.30′/W090°34.87′
VPEGR	GAS TANKS	N38°35.80′/W090°19.32′
VPEGK	CT DETEDS	N38 33.80 / W090 19.32

N38°47.17′/W090°39.25′

ST PETERS

WAYPOINT IDENT	COLLOCATED VFR CHECKPOINT	LOCATION
VPFAI	HOWELL ISLAND	N38°40.00′/W090°43.00′
VPFFY		N38°55.37′/W090°17.30′
VPGPF		N38°35.60′/W090°26.92′
VPGVI		N38°32.30′/W090°27.80′
VPHRQ	CHAIN OF ROCKS BRIDGE	N38°45.88′/W090°10.42′
VPIBO	WATERLOO	N38°20.00′/W090°09.00′
VPJMU	HORSESHOE LAKE	N38°41.00′/W090°05.00′
VPKNY	PACIFIC	N38°29.00′/W090°44.00′
VPLES	ST CHARLES	N38°47.00′/W090°30.00′
VPLIW	SIX FLAGS	N38°30.67′/W090°40.47′
VPLXU	GATEWAY ARCH	N38°37.50′/W090°11.00′
VPNSY	WOOD RIVER REFINERIES	N38°50.00′/W090°05.00′
VPNZY	WENTZVILLE	N38°48.83'/W090°50.98'
VPRAZ	JERSEYVILLE	N39°07.00′/W090°20.00′
VPRMO	FOREST PARK	N38°38.00′/W090°17.00′
VPWKO	COLUMBIA	N38°27.00′/W090°12.00′
VPXXI	MILLSTADT	N38°27.50′/W090°05.68′
VPYID	MOSENTHEIN ISLAND	N38°43.00′/W090°12.25′

## SALT LAKE CITY HELICOPTER CHART

VPAIR	SALTAIR	N40°44.85′/W112°11.22′
VPBEE	SOUTH INTERCHANGE	N40°38.18'/W111°54.23'
VPBRN	BARN	N40°54.28′/W112°10.15′
VPCAP	STATE CAPITOL	N40°46.67′/W111°53.25′
VPCHS		N40°42.28'/W112°05.92'
VPCOP	BINGHAM COPPER MINE	N40°31.38′/W112°09.00′
VPCWY	CAUSEWAY	N41°05.37′/W112°07.17′
VPCYN	PARLEYS CANYON	N40°42.67′/W111°48.10′
VPFPC	FREE PORT CENTER	N41°05.92'/W112°02.27'
VPFPK	FRANCIS PEAK	N41°01.98′/W111°50.30′
VPGFS	GARFIELD STACK	N40°43.28′/W112°11.88′
VPHVE	SPAGHETTI BOWL	N40°43.50′/W111°54.22′
VPJRT	JORDAN RIVER TEMPLE	N40°35.02′/W111°55.58′
VPKSL	KSL ANTENNA	N40°46.80′/W112°05.80′
VPLGN	LAGOON AMUSEMENT PARK	N40°59.08′/W111°53.57′
VPMDH	MCKAY DEE HOSPITAL	N41°11.50′/W111°57.08′
VPMMT	MICROWAVE TOWERS	N40°48.50′/W111°53.37′
VPMSH		N41°01.67′/W112°02.47′
VPNSL		N40°50.15′/W111°54.90′
VPNTP		N41°03.57′/W112°14.23′
VPOGE	GRAIN ELEVATOR	N41°13.13′/W112°00.45′
VPOPS	POWER STATION	N41°20.38′/W112°02.78′
VPPEN	STATE PRISON	N40°29.88′/W111°53.62′
VPPPT	PROMONTORY POINT	N41°12.28′/W112°25.73′
VPPTM	POINT OF THE MOUNTAIN	N40°27.42′/W111°54.83′
VPPVO	PROVO CANYON	N40°18.77′/W111°39.45′
VPRWY		N40°48.48′/W112°00.33′
VPSLC	I-15/I-80 INTERCHANGE	N40°45.83′/W111°54.85′
VPTIP	SOUTH TIP	N40°50.93′/W112°10.92′
VPWBR	WEBER CANYON	N41°08.17′/W111°54.83′
VPWBT		N40°38.00′/W112°03.33′

# SALT LAKE CITY TERMINAL AREA CHART/FLYWAY CHART

VPAIR	SALTAIR	N40°44.85′/W112°11.22′
VPBEE	SOUTH INTERCHANGE	N40°38.18′/W111°54.23′
VPBRN	BARN	N40°54.28′/W112°10.15′
VPCAP	STATE CAPITOL	N40°46.67′/W111°53.25′
VPCHS		N40°42.28′/W112°05.92′
VPCOP	BINGHAM COPPER MINE	N40°31.38′/W112°09.00′
VPCVI	CENTERVILLE INTERCHANGE	N40°55.30′/W111°53.43′
VPCWY	CAUSEWAY	N41°05.37′/W112°07.17′
VPCYN	PARLEYS CANYON	N40°42.67′/W111°48.10′
VPFPC	FREE PORT CENTER	N41°05.92′/W112°02.27′
VPFPK	FRANCIS PEAK	N41°01.98′/W111°50.30′
VPGFS	GARFIELD STACK	N40°43.28′/W112°11.88′

WAYPOINT IDENT	COLLOCATED VFR CHECKPOINT	LOCATION
VPHVE	SPAGHETTI BOWL	N40°43.50′/W111°54.22′
VPJRT	JORDAN RIVER TEMPLE	N40°35.02′/W111°55.58′
VPKSL	KSL ANTENNA	N40°46.80′/W112°05.80′
VPLGN	LAGOON AMUSEMENT PARK	N40°59.08'/W111°53.57'
VPMDH	MCKAY DEE HOSPITAL	N41°11.50′/W111°57.08′
VPMMT	MICROWAVE TOWERS	N40°48.50′/W111°53.37′
VPMSH		N41°01.67'/W112°02.47'
VPNSL		N40°50.15'/W111°54.90'
VPNTP		N41°03.57'/W112°14.23'
VPOGE	GRAIN ELEVATOR	N41°13.13′/W112°00.45′
VPOPS	POWER STATION	N41°20.38′/W112°02.78′
VPPEN	STATE PRISON	N40°29.88'/W111°53.62'
VPPPT	PROMONTORY POINT	N41°12.28′/W112°25.73′
VPPTM	POINT OF THE MOUNTAIN	N40°27.42′/W111°54.83′
VPPVO	PROVO CANYON	N40°18.77′/W111°39.45′
VPRWY		N40°48.48'/W112°00.33'
VPSLC	I-15/I-80 INTERCHANGE	N40°45.83'/W111°54.85'
VPTIP	SOUTH TIP	N40°50.93'/W112°10.92'
VPUOU	U OF U EVENTS CENTER	N40°45.73′/W111°50.28′
VPWBR	WEBER CANYON	N41°08.17'/W111°54.83'
VPWBT		N40°38.00′/W112°03.33′
VPZ00	HOGLE ZOO	N40°45.00′/W111°48.95′

# SAN DIEGO TERMINAL AREA CHART/FLYWAY CHART

VPLDP	DANA POINT	N33°27.62′/W117°42.87′
VPLSP	SIGNAL PEAK	N33°36.33′/W117°48.63′
VPOCN		N33°14.15′/W117°26.63′
VPSBC	BARONA CASINO	N32°56.25′/W116°52.60′
VPSBL		N33°05.18′/W117°18.55′
VPSBM	BLACK MOUNTAIN	N32°58.87'/W117°07.00'
VPSCF		N32°48.55′/W117°09.17′
VPSCM	COWLES MOUNTAIN	N32°48.72′/W117°01.97′
VPSCP	CRYSTAL PIER	N32°47.77′/W117°15.42′
VPSCR		N32°39.37′/W117°07.30′
VPSFB	IRON MOUNTAIN	N32°58.25′/W116°57.33′
VPSLJ	LAKE JENNINGS	N32°51.53′/W116°53.28′
VPSMB		N32°45.57′/W117°12.22′
VPSMP		N33°22.70′/W117°36.75′
VPSMS	MOUNT SOLEDAD	N32°50.40′/W117°15.10′
VPSMV		N32°45.75′/W117°09.80′
VPSMW	MOUNT WOODSON	N33°00.52′/W116°58.23′
VPSOP	OTAY MESA PRISON	N32°35.82′/W116°55.28′
VPSOT	LOWER OTAY LAKE	N32°37.73′/W116°55.38′
VPSPL	SOUTH POINT LOMA	N32°39.90′/W117°14.55′
VPSPP	POWER PLANT	N33°08.25′/W117°20.23′
VPSQS	QUALCOMM STADIUM	N32°46.98′/W117°07.23′
VPSRT	DEL MAR RACE TRACK	N32°58.58′/W117°15.95′
VPSSM	SAN MIGUEL MOUNTAIN	N32°41.78′/W116°56.18′
VPSSV	SAN VICENTE ISLAND	N32°55.53′/W116°55.00′
VPSTP	TORREY PINES GOLF COURSE	N32°54.17′/W117°14.68′
VPSVA		N33°11.48′/W117°16.38′

## SAN FRANCISCO SECTIONAL CHART

VPKBG KINGSBURY GRADE N38°58.75′/W119°53.20′

## SAN FRANCISCO TERMINAL AREA CHART/FLYWAY CHART

VPALT	ALTAMONT PASS	N37°44.35′/W121°35.42′
VPANT	ANTIOCH BRIDGE	N38°01.45′/W121°45.02′
VPBBR	BENICIA BRIDGE	N38°02.50′/W122°07.45′
VPCAL	CALAVERAS RESERVOIR	N37°28.16′/W121°48.93′
VPCBT	LAKE CHABOT	N37°43.68′/W122°06.94′
VPCOY	COYOTE HILLS	N37°32.50′/W122°05.06′
VPCQZ	CARQUINEZ BRIDGE	N38°03.66′/W122°13.52′
VPCRL		N37°11.00′/W121°41.06′
VPCRY	CRYSTAL SPRINGS CAUSEWAY	N37°30.56′/W122°21.10′

## SW, 17 DEC 2009 to 11 FEB 2010

	VFR WATPUINIS	
WAYPOINT IDENT	COLLOCATED VFR CHECKPOINT	LOCATION
VPDUB	DUBLIN	N37°42.06′/W121°55.36′
VPEMB	EMBASSY SUITES	N37°26.05′/W121°53.83′
WAYPOINT IDENT	COLLOCATED VFR CHECKPOINT	LOCATION
VPCSH	CAL STATE UNIVERSITY	N37°39.52′/W122°03.52′
VPDAM	DEL VALLE DAM	N37°36.91′/W121°44.78′
VPDLR		N37°07.00′/W121°47.06′
VPDUB	DUBLIN	N37°42.06′/W121°55.36′
VPEMB	EMBASSY SUITES	N37°26.05′/W121°53.83′
VPGGF	GOLDEN GATE FIELDS	N37°53.07′/W122°18.71′
VPGIL	GILROY	N37°01.37′/W121°33.99′
VPHHH	HAMILTON	N38°03.58′/W122°30.66′
VPKG0	KGO	N37°31.58′/W122°06.10′
VPLEX	LEXINGTON RESERVOIR	N37°11.66′/W121°59.18′
VPMID	MID-SPAN SAN MATEO BRIDGE	N37°36.28′/W122°11.81′
VPMOR	MORMON TEMPLE	N37°48.46′/W122°11.95′
VPNUM	NUMMI PLANT	N37°29.56′/W121°56.58′
VPPAC		N37°38.00′/W122°32.07′
VPPRU	PRUNEYARD	N37°17.33′/W121°56.01′
VPSAR	SARATOGA	N37°15.26′/W122°02.33′
VPSLA	SLAC/LINEAR ACCELERATOR	N37°24.75′/W122°14.35′
VPSTB	STINSON BEACH	N37°54.45′/W122°40.41′
VPSUN	SUNOL GOLF COURSE	N37°34.85′/W121°53.23′
VPUTC	U.T.C.	N37°13.93′/W121°41.35′
VPWAL	WALNUT CREEK	N37°53.78′/W122°04.30′
VPWAM		N37°30.28′/W122°10.00′
VPWFR	CEMENT PLANT	N37°30.88′/W122°12.26′
	TAMPA/ORLANDO TERMINAL AREA CHAR	T/FLYWAY CHART
VPBOV		N27°57.00′/W080°46.75′
VPCNY		N28°30.00′/W080°45.00′
VPDAD	DADE CITY	N28°22.57′/W082°11.25′
VPDFI	5/152 0111	N29°00.17′/W081°20.85′
VPDUT		N27°37.70′/W082°09.10′
VPEAR	CLEARWATER BEACH	N27°58.67′/W082°49.83′
VPFFU	oee with the serior.	N28°57.08′/W081°00.33′
VPGPE	ST PETE BEACH	N27°43.50′/W082°44.67′
VPHUC	5. 1 E.E BE.1511	N28°19.87′/W082°43.77′
VPKER	LAKE PARKER	N28°04.00′/W081°56.00′
		, ,

# WASHINGTON SECTIONAL CHART

N28°48.00′/W080°52.00′

N29°00.00'/W080°51.00'

VPACE	 N38°07.82′/W076°48.75′
VPAXI	 N38°34.57′/W076°20.38′
VPBRA	 N36°13.75′/W076°08.08′
VPGCE	 N36°03.90′/W076°36.42′
VPWZO	 N36°00.87′/W075°40.07′

VPLEV

VPLJA

## **VOR RECEIVER CHECK**

# VOR RECEIVER CHECKPOINTS AND VOR TEST FACILITIES (VOT)

The use of VOR airborne and ground checkpoints is explained in Aeronautical Information Manual, Basic Flight Information and ATC Procedures.

NOTE: Under columns headed "Type of Checkpoint" & "Type of VOT Facility" G stands for ground. A/ stands for airborne followed by figures (2300) or (1000–3000) indicating the altitudes above mean sea level at which the check should be conducted. Facilities are listed in alphabetical order, in the state where the checkpoints or VOTs are located.

# ARIZONA VOR RECEIVER CHECKPOINTS

		Type			
		Check	Azimuth	Dist.	
		Pt.	from	from	
		Gnd.	Fac.	Fac.	
Facility Name (Arpt Name)	Freq/Ident	AB/ALT	Mag.	N.M.	Checkpoint Description
Bard	116.8/BZA	A/2000	242	5.9	Over interstate 8 freeway crossing canal.
Drake (Ernest A. Love Fld)	114.1/DRK	A/7000	124	5.0	Over apch end Rwy 30.
Flagstaff (Pulliam)	113.85/FLG	A/8000	033	6.5	Over red and white square twr.
Fort Huachuca (Sierra Vista Muni/Libby AAF)	113.6/FHU	G	80		Runup area Twy G at 26 end.
Kingman (Kingman)	108.8/IGM	G	220	1.0	Center of runup area apch end Rwy 03.
Tucson (Tucson Intl)	116.0/TUS	G	318	0.7	On runup pad northeast of Twy A17.
Willie (Phoenix–Mesa Gateway)	113.3/IWA	G	124	0.6	On Twy P runup area Rwy 30C.
Winslow (Winslow-Lindbergh Rgnl)	112.6/INW	A/6000	106	5.0	Over apch end Rwy 29.

## **VOR TEST FACILITIES (VOT)**

Facility Name		Type, VOT	
(Airport Name)	Freq.	Facility	Remarks
Phoenix Sky Harbor Intl	109.0	G	
Phoenix-Mesa Gateway	113.3/IWA	G	On Twy G between Rwy
Prescott (Ernest A. Love Fld)	110.0	G	12R and Rwy 12C.

# CALIFORNIA VOR RECEIVER CHECKPOINTS

		Type Check Pt. Gnd.	Azimuth from Fac.	Dist. from Fac.	
Facility Name (Airport Name)	Freq/Ident	AB/ALT	Mag.	N.M.	Checkpoint Description
Arcata (Arcata)	110.2/ACV	G	148	0.7	On runup area apch end Rwy 32.
Chico (Chico Muni)	109.8/CIC	G	302	1.1	On north runup area.
Clovis (Fresno Yosemite Intl)	112.9/CZQ	A/1400	130	7.2	Over apch end Rwy 11L.
Compton Woodley	113.6/LAX	A/1000	091	10.0	Over apch end Rwy 25L.
Concord (Buchanan Field)	117.0/CCR	A/1200	172		Over apch end Rwy 19L.
Daggett (Barstow-Daggett)	113.2/DAG	A/2800	223	11.7	Over apch end Rwy 22.
El Nido (Merced Muni/Macready Fld)	114.2/HYP	A/1200	290		Over apch end Rwy 30.
Fortuna (Murray Fld)	114.0/FOT	A/1500	015	9.6	Over Rwy apch end 11.
Fortuna (Rohnerville)	114.0/FOT	A/1400	130	8.2	Over apch end Rwy 11.
Hancock Fld)	111.0/GLJ	A/1200	118		Over apch end Rwy 30.
Imperial (Imperial County) Lake Hughes (General Wm J. Fox	115.9/IPL	A/1500	313	5.7	Over apch end Rwy 32.
Airfield)	108.4/LHS	G	065	18.1	On the main ramp at east terminal gas pit.
Maxwell (Willows-Glenn County)	110.0/MXW	A/1200	342	11.5	Over apch end Rwy 34.

		Type Check Pt.	Azimuth from	Dist. from	
		Gnd.	Fac.	Fac.	
Facility Name (Airport Name)  Modesto	Freq/Ident	AB/ALT	Mag.	N.M.	Checkpoint Description
(Modesto City-Co-Harry Sham Fld)	114.6/MOD	G	093	0.6	On ramp area next to intersection of Taxiways A and A1.
Oakland (Metropolitan Oakland Intl)	116.8/0AK	G	081	0.9	On runup pad end of Rwys 27R and 27L.
Palmdale (General Wm. J. Fox Airfield)	114.5/PMD	A/5000	296	10.1	Over center taxiway/runway intersection.
Paradise (Ontario Intl)	112.2/PDZ	G	320	8.9	Intersection of Twy Q, Twy P and Rwy 26L.
Paso Robles (Paso Robles Muni)	114.3/PRB	G	247	0.4	Transient parking ramp front of terminal.
Placerville (Placerville)	115.5/HNW	A/5200	076	8.7	Dam on west end of lake.
Pomona (Cable)	110.4/POM	A/3500	053	5.1	Over apch end of Rwy 06.
Red Bluff	115.7/RBL	A/1500	358	5.8	Over the center of Red Bluff Fairgrounds Race Track.
Redding (Redding Muni)	108.4/RDD	G	310	0.5	Over runup area apch end Rwy 12.
Sacramento (McClellan Airfield)	109.2/MCC	G	358	.9	On Taxiway at end of Rwy 16.
	109.2/MCC	G	015	0.4	On Taxiway B.
Sacramento (Sacramento Executive)	115.2/SAC	A/1000	016	4.4	Over apch end Rwy 02.
Salinas (Salinas Muni)	117.3/SNS	G	247	0.4	Intersection of twys C and D.
San Francisco (San Francisco Intl)	115.8/SF0	A/1800	153	6.7	Over Crystal Springs causway 5 NM west of San Carlos arpt.
San Jose (Norman Y. Mineta San Jose Intl).	114.1/SJC	G	123	1.7	On Twy B and runup area Rwy 30L.
San Jose (Norman Y. Mineta San Jose Intl).	114.1/SJC	G	132	0.6	Twy V abeam Twy J.
Santa Barbara	114.9/RZS	A/2000	279	11	Over Lake Cachuma Dam spillway.
Santa Barbara (Santa Barbara Muni)	114.9/RZS	G	197	5.8	At intersection of Taxiway D and H.
Santa Rosa (Charles M. Schulz-Sonoma Co)	113.0/STS	A/2000	323	5.9	River bridge on Highway 101.
	113.0/STS	G	121		.5 NM runup Rwy 32.
	113.0/STS	G	344		.4 NM runup Rwy 14.
Scaggs Island (Napa County)	112.1/SGD	A/1000	047	5.4	Over rotating beacon.
Thermal (Jacqueline Cochran Rgnl)	116.2/TRM	G	329	0.3	On centerline of twy 375' in front of hangar.
Van Nuys	113.1/VNY	G	169	0.5	At intersection of Twy D and Twy A.
	113.1/VNY	G	161	1.6	On West runup area rwy 34L.
	113.1/VNY	G	142	0.4	Runup area Rwy 16L.
Ventura (Camarillo)	108.2/VTU	G	330	6.1	Runup Rwy 26.
	108.2/VTU	G	320	6.5	Runup Rwy 08.
Ventura (Oxnard)	108.2/VTU	G	289	9.0	On parallel Twy W of Rwy 25 runup area.
Visalia (Visalia Muni)	109.4/VIS	A/1300	107	5.0	Over apch end rwy 12.
Woodside (Hayward Executive)	113.9/0SI	G	009		Runup area Rwy 28L.
Woodside (San Carlos)	113.9/0SI	A/2000	355	7.2	Over Rwy 30 numbers.
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# VOR RECEIVER CHECK VOR TEST FACILITIES (VOT)

Facility Name		Type, VOT	
(Airport Name)	Freq.	Facility	Remarks
Bakersfield	111.2	G	
Hawthorne (Jack Northrop Fld/Hawthorne Muni)	113.9	G	Unusable on south taxiway.
Long Beach (Daugherty Field)	113.9	G	Unusable all areas except runup Rwy 25L at Taxiway J, runup Rwy 25R.
Los Angeles Inti	113.9	G	Unusable all areas except intersection of Twys A at G runup Rwy 25L at Twy F and intersection of Twy C at N.
Sacramento Executive	111.4	G	
Sacramento Intl	111.4	G	
San Diego (EL Cajon) (Gillespie Fld)	110.0	G	
San Diego Intl	109.0	G	Unusable all areas except runup area Rwy 27.
San Diego (Montgomery)	109.0	G	Unusable all areas except runup areas for Rwys 05 and 28L.
San Francisco Intl	111.0	G	
Santa Ana (John Wayne Airport/Orange Co)	110.0	G	
Santa Monica Muni	113.9	G	Unusable all areas except runup areas for Rwys 03 and 21.
Torrance (Zamperini Fld)	113.9	G	

# COLORADO VOR RECEIVER CHECKPOINTS

Facility Name (Airport Name)	Freq/Ident	Type Check Pt. Gnd. AB/ALT	Azimuth from Fac. Mag.	Dist. from Fac. N.M.	Checkpoint Description
Akron	114.4/AKO 108.4/CEZ 115.4/BJC 115.6/CHE 116.7/PUB	A/6000 A/7000 G A/7200 G	179 196 060 248 249	7.0 0.6 9.6 3.8	Over Igtd twr. Over apch end rwy 21. Runup area at Alpha 17. Over apch end rwy 25. On painted circle with arrow on runup pad S side
	116.7/PUB	A/7300	294	7.8	apch end rwy 08L.  Over KOAA TV twr, 5.4 NM  of arpt.

## **VOR TEST FACILITIES (VOT)**

Facility Name		Type, VOT	
(Airport Name)	Freq.	Facility	Remarks
Centennial	108.2	G	VOT unusable east of Twy
(City of Colorado Springs Muni)	110.4	G	C-4.
Denver International	110.0	G	VOT unusable in terminal area N of Twy AA to Twy BN and W Twy L to Twy

# VOR RECEIVER CHECK NEVADA

## **VOR RECEIVER CHECKPOINTS**

Facility Name (Airport Name)	Freq/Ident	Type Check Pt. Gnd. AB/ALT	Azimuth from Fac. Mag.	Dist. from Fac. N.M.	Checkpoint Description
Bullion (Elko Rgnl)	114.5/BQU 110.6/ELY	A/7000 G	343 059	5.1	Over center of race track. Intersection of Twy A and
Mustang (Reno/Stead)	117.9/FMG 114.2/LWL 108.2/INA	A/7000 A/7000 A/6000	291 286 024	12.8 8.3 6.5	Twy B. Over atct. Over radio twr. Over highway bridge crossing railroad tracks. Runup area Rwy 32.

# **VOR TEST FACILITIES (VOT)**

Facility Name	Type, VOT	
(Airport Name) Free	. Facility	Remarks

## **NEW MEXICO**

## **VOR RECEIVER CHECKPOINTS**

		Type Check Pt. Gnd.	Azimuth from Fac.	Dist. from Fac.	
Facility Name (Airport Name)	Freq/Ident	AB/ALT	Mag.	N.M.	Checkpoint Description
Carlsbad (Carlsbad City Air Terminal)	116.3/CNM	G	333	5.4	On Twy A in front of fire department.
Hobbs (Lea County RgnI)	111.0/HOB	G	030	3.5	On runup pad apch end Rwy 03.
Las Vegas (Las Vegas Muni)	117.3/LVS	A/8500	233	6.0	Over yellow water tank.
Roswell (Roswell Intl Air Center)	116.1/CME	G	100	5.2	On middle of W ramp adjacent to twy.
Santa Fe (Santa Fe County Muni)	110.6/SAF	G	334	4.7	At junction main intersection of twy and ramp. (Checkpoint unusable).
Silver City (Grant Co)	110.8/SVC	G	100	0.9	Twy entrance to Rwy 26 just west of approach end.
Texico (Clovis Muni)	112.2/TX0	A/6000	240	12.7	Over rotating beacon on steel twr adjacent to terminal bldg.
Truth or Consequences (Truth or Consequences Muni)	112.7/TCS	G	155	3.2	On Twy A 2000' from AER 31.
Tucumcari (Tucumcari Muni)	113.6/TCC	G	258	0.5	100' in front of terminal on twy.

## **VOR TEST FACILITIES (VOT)**

Facility Name		Type, VOT	
(Airport Name)	Freq.	Facility	Remarks
Albuquerque Intl. Sunport	111.0	G	

# VOR RECEIVER CHECK UTAH

## **VOR RECEIVER CHECKPOINTS**

Facility Name (Airport Name)	Freq/Ident	Type Check Pt. Gnd. AB/ALT	Azimuth from Fac. Mag.	Dist. from Fac. N.M.	Checkpoint Description
Cedar City (Cedar City Rgnl)		A/6500	177	4.7	Over apch end Rwy 20.
Delta (Delta Muni)	116.1/DTA	A/6000	346	5.3	Over apch end of Rwy 17.
Vernal (Vernal Rgnl)	108.2/VEL	A/8000	021	6.5	Over towers on knoll.

## **VOR TEST FACILITIES (VOT)**

Facility Name		Type, VOT	
(Airport Name)	Freq.	Facility	Remarks
Salt Lake City Intl	111.0	G	

The following tabulation lists all reported parachute jumping sites in the area of coverage of this directory. Unless otherwise indicated, all activities are conducted during daylight hours and under VFR conditions. The busiest periods of activity are normally on weekends and holidays, but jumps can be expected at anytime during the week at the locations listed. Jumps within restricted airspace are not listed.

All times are local and altitudes MSL unless otherwise specified.

Contact facility and frequency is listed at the end of the remarks, when available, in bold face type.

Refer to Federal Aviation Regulations Part 105 for required procedures relating to parachute jumping.

Organizations desiring listing of their jumping activities in this publication should contact the nearest FSS, tower or ARTCC.

Qualified parachute jumping sites will be depicted on the appropriate visual chart(s).

Note: (c) in this publication indicates that the parachute jump area is charted.

To qualify for charting, a jump area must meet the following criteria:

- (1) Been in operation for at least 1 year.
- (2) Operate year round (at least on weekends).
- (3) Log 4,000 or more jumps each year.

In addition, jump sites can be nominated by FAA Regions if special circumstances require charting.

LOCATION	DISTANCE AND RADIAL FROM NEAREST VOR/VORTAC	MAXIMUM ALTITUDE	REMARKS
	ARIZONA		
(c) Buckeye Muni		14,000	Daily SR-2 hours after SS. 2 NM
(c) Bullhead City, Eagle Airpark (c) Casa Grande Muni (c) Coolidge Muni	9 NM; 041° Stanfield	15,000 12,000 17,999	radius. 3 NM Daily 0645–1835 2 NM Daily 0600–1700. 15 NM radius, daily. High altitude,
(c) coolings main	20 1111, 010 Gamilia	11,000	full canopy, free fall, and low level combat parachute jumping. Large military transports in vicinity of arpt.
(c) Cottonwood Arpt	22.1 NM; 072° Drake	14,000	Continuous during dalgt hrs.  Albuquerque Center 124.5
(c) Eloy Muni	17 NM; 094° Stanfield	17,500	4 NM radius. Daily SR-2 hours after SS (ctc UNICOM for PAJA advisories. Landing area ¼ mile E of rwy centerline).
(c) Estrella Sailport	17 NM: 300° Stanfield	14,000	1 NM radius. Daily SR–SS.
Kingman Arpt		12,000	5 NM radius, daily SR–SS.
(c) Laguna AAF/Yuma Proving		,,	- · · · · · · · · · · · · · · · · · · ·
Ground	11.8 NM; 048° Bard	25,000	Continuous 24 hrs. 5 NM radius, Laguna AAF Control Zone.
(c) Marana Rgnl	25 NM; 308° Tucson	17,999	15 NM radius, Continuous. <b>Tucson Tower 125.1</b>
(c) Marana, Pinal Airpark	33 NM; 308° Tucson	25,000	15 NM radius, Continuous.
	CALIFORNIA		
Apple Valley Arpt		15,000	2 NM radius, daily SR-SS.
(c) Brickland's Ranch	12.5 NM; 339° Redding	3,900	3 NM radius, May 1 thru Nov 1 yearly.
(c) Byron Arpt	23 NM; 250° Manteca	15,000	Daily SR-SS
(c) California City Muni Arpt		17,500	Daily SR-SS.
(c) Camarillo Arpt	8.4 NM; 000° Ventura	14,000	2 NM radius, usually blo 10,000', SR-SS; Listen for 1-minute call on Camarillo Twr freq.
(c) Cloverdale Muni Arpt	18 NM; 316° Santa Rosa	12,500	1 NM radius, Mon-Sun 0800-2100.
(c) Davis/Woodland/Winters,			
	16.5 NM; 283° Sacramento	13,500	3 NM radius, daily SR-2300.
(c) Fall River Mills Arpt		8,700	2 NM radius, daily May 1-Nov 30.
(c) Hemet/Diamond Valley	12.5 NM; 107° Homeland	14,000	3 NM radius. Wed-Fri 0900-SS. Sat-Sun 0800-SS, other days and times by request.
(c) Hollister Muni	16.6 NM; 017° Salinas	17,999	1 NM. Daily, all hours. Oakland Center 128.7
(c) Lake Elsinore, Skylark Fld	10.5 NM; 198° Homeland	14,000	1 NM radius, 0800-SS daily
(c) Lincoln Rgnl/Karl Harder Fld.		15,000	Daily 0800-SR
(c) Lodi Arpt	15 NM; 285° Linden	15,000	Continuous 24 hrs. 1 NM radius. Other altitudes by notam.
Lompoc Arpt	20 NM; 277° Gaviota	15,000	4 NM radius, Thu-Mon SR-SS.
(c) <b>Lompoc</b>	14 NM; 284° Gaviota	17,999	1 NM radius, daily 1600-0400.

LOCATION	DISTANCE AND RADIAL FROM NEAREST VOR/VORTAC	MAXIMUM ALTITUDE	REMARKS
(c) Los Alamitos AAF	At field	1,500 AGL	Weekends and occasional weekdays
(c) Madera Muni Arpt	15.2 NM; 277° Clovis	15,000	3 NM radius. Daily SR-1 hour after SS.
(c) Marina Muni	7.6 NM; 259° Salinas	12,500	SR-SS Sat and Sun
Murrieta, Bear Creek Arpt	13 NM; 178° Homeland	11,500	1 NM radius. Mon-Fri
			0800-sunset, Sat-Sun 0630-sunset.
(c) Oro Loma, Eagle Fld		12,500	2 NM radius, Fri-Sun.
Palm Springs	12 NM; 130° Palm Springs	14,000	1 NM radius. Daily sunrise to sunset.
(c) Paradise Skypark Arpt		14,500	Daily, 0800-SS.
(c) Perris Valley Arpt		14,500	Daily SR-SS
(c) Salinas, Davis Road Drop Zone		18,000	1 NM radius, Daily 0500–1900
(c) San Diego, Brown Fld Muni		14,000	2 NM radius. Mon-Fri 0800-1800.
(c) San Diego, Leon Drop Zone	11.5 NM; 192° Mission Bay	2,800	Continuous. 1NM radius. Altitudes
			above 2800–15000 MSL avbl
			upon request, (ctc SOCAL prior to entering Terminal Control Area).
(c) San Diego, Otay Reservoir	4 4 NM: 058° Poggi	5,800	1NM radius. Daily SR–SS.
(c) San Diego, South Bay		2,800	Daily SR-SS. 1NM radius altitudes
(-, <b>g</b> -, <b>,</b>		_,	above 2800–3300 MSL avbl upon
			request, (ctc SOCAL prior to
			entering Terminal Control Area).
(c) San Diego, Trident		15,000	Daily SR-SS. 1NM radius
Santa Maria		12,500 AGL	0900-SS, Sat, Sun and holidays
(c) Santa Ynez		17,999	1 NM radius, daily 1600-0400.
(c) Slate Creek	30 NM; 323° Redding	5,500	3 NM radius. May 1 thru Nov 1
(c) Taft Drop Zone	25.7 NM· 197° Shafter	13,000	yearly. 1 NM radius. SR-SS, occasional
(c) rait brop zone	25.7 NW, 157 Sharter	13,000	night jumps by NOTAM.
(c) Taft-Kern Co Arpt	21 NM: 066° Fellows	13,000	2 NM radius. Daily SR–SS,
			occasional ngt jumps by NOTAM.
(c) Tres Pinos Drop Zone	16 NM; 045° Salinas	12,500	1 NM radius. Daily SR-SS.
(c) Twentynine Palms	12 NM; 265° Twentynine Palms.	12,500	1 NM radius, 0900-SS, Sat, Sun,
			and holidays.
(c) Wilton Drop Zone	17.5 NM; 080° Sacramento	1,500 AGL	Hvy equip, paratroopers.
	COLORADO		
Boulder Muni		18,000	2 NM radius. Daylight hrs.
(c) Brush Muni		17,700	2 NM radius, Daily 0800-SS.
(c) Calhan Arpt		17,500	2 NM radius, 1hr before SR- 1 hr after SS daily.
(c) Canon City, Fremont County	32.9 NM; 271° Pueblo	17,500	2 NM radius. Weekends
Arpt			0600–2100.
(c) Colorado Springs, USAF Academy Airstrip	O NM: 266° Block Forrost	17 500	Doily CD CC accordanally til 2200
(c) Fort Collins/Loveland Muni		17,500	Daily SR-SS occasionally til 2200.
	19.5 NM; 248° Gill	17,500	3 NM Wed-Sun SR-1 hr after SS.
Greeley, Skydive the Farm (c) Hugo, Kelly Drop Zone		14,500 8,000	2 NM radius. Fri-Sun 0800-SS. 2 NM radius. Heavy equipment
(o) mago, itomy brop zone	10 mm, 204 mago	0,000	paratroopers possible jumps
			during IFR/marginal VFR.
(c) Longmont, Vance Brand Arpt	15 NM; 346° Jeffco	17,900	2 NM radius. Daily SR-2 hrs after
			SS.
(c) Trinidad, Pinon Drop Zone	28 NM; 279° Tobe	8,000	2 NM radius. Heavy equipment
			paratroopers possible jumps during IFR/marginal VFR.

## PARACHUTE JUMPING AREAS

LOCATION	DISTANCE AND RADIAL FROM NEAREST VOR/VORTAC NEVADA	MAXIMUM ALTITUDE	REMARKS
(c) Boulder City Arpt	3 NM; 164° Boulder City	17,000	0.5 NM radius. Daily SR-SS.
(c) El Dorado Jump Zone	7 NM; 195° Boulder City	17,000	0.5 NM radius. Daily, SR-SS.
Indian Springs AF Aux Arpt	38 NM; 304° Las Vegas	10,000	5 NM radius. Daily SR-SS.
(c) Jean Drop Zone	24.1 NM; 191° Las Vegas	15,000	1 NM radius. Daily SR-SS.
(c) Mesquite Arpt	11.4 NM; 054° Mormon Mesa	17,500	2 NM radius. Continuous SR-SS.
(c) Minden-Tahoe Arpt(c) Nellis AFB, Gunfighter Drop	26 NM; 098° Squaw Valley	17,000	5 NM radius. Daily SR-SS.
Zone	12.7 NM; 25° Las Vegas	17,500 AGL	1.3 NM east of rwys. SR-SS Sat-Sun. Other times by NOTAM.
(c) Pahrump	49 NM; 126° Beatty	12,500	Tue-Sun SR-SS
Reno/Stead Arpt	15 NM; 292° Mustang	14,000	1.0 NM radius. Daily SR-SS.
(c) Tonopah Arpt	10 NM; 270° Tonopah	10,000	1 NM radius. Daily SR-SS.
	NEW MEXICO		
Albuquerque	6 NM: 050° Albuquerque	18,000	Weekends and holidays
• • • • • • • • • • • • • • • • • • • •	17 NM; 140° Albuquerque	17,000	SR-SS weekends.
(c) Belen, Alexander Muni (c) Santa Teresa, Dona Ana Co at	12 NM; 346° Socorro	16,000	1 NM radius. Daily SR-SS.
Santa Teresa Arpt	22 NM; 268° El Paso	13,000	1 NM radius. SR-SS Sat-Sun. S side of arpt.
	UTAH		
(c) Cedar Fort, Cedar Valley			
Arpt	6.5 NM; 313° Fairfield	17,500	3 NM radius. Daily SR-2300.
Goshen Wells, Cedar Valley (c) Hurricane, General Dick Stout	4 NM; 270° Fairfield	10,000	0.25 NM radius. Occasional use
Fld	15 NM; 060° St George	15.000	1 NM radius. Daily SR-SS.
	7.2 NM; 051° Brigham City	15,000	0.5 NM radius 0900-sunset. Weekends and Holidays.
(c) Ogden-Hinckley	5 NM; 085° Ogden	17,999	2 NM radius. Daily SR–SS. NE corner Ogden Arpt.
(c) Bolinder Fld-Tooele Valley Arpt	24 NM; 215° Wasatch	17,000	2 NM radius. Daily 1300-0600.

#### AERONAUTICAL CHART BULLETIN

The purpose of this bulletin is to provide major changes in aeronautical information that have occurred since the last publication date of each Sectional Aeronautical, VFR Terminal Area, and Helicopter Route Charts listed. The general policy is to include only those changes to controlled airspace and special use airspace that present a hazardous condition or impose a restriction on the pilot, and major changes to airports and radio navigational facilities, thereby providing the VFR pilot with the essential data necessary to update and maintain chart currency. The data is grouped by type and then by effective date. When a new edition of the Aeronautical Chart is published, the corrective tabulation will be removed from this bulletin. Inasmuch as this Bulletin provides major changes only, pilots should consult the airport listing in this directory for all new information. Users of U.S. World Aeronautical Charts (WAC) and U.S. Gulf Coast VFR Aeronautical Charts should consult the appropriate Sectional and VFR Terminal Area Charts for revisions.

Military Training Routes (MTRs) are shown on Sectional Aeronautical Charts, VFR Terminal Area, and Helicopter Route Charts. Only the route centerline, direction of flight and the route designator are shown — route widths and altitudes are not shown. Since these routes are subject to change every 56 days and the charts are reissued generally every 6 months, routes with a change in the alignment of the charted route centerline will be listed in this Aeronautical Chart Bulletin below. You are advised to contact the nearest FSS for route dimensions and current status for those routes affecting your flight.

## ALBUQUERQUE SECTIONAL 84th Edition. 22 Oct 2009

**OBSTRUCTIONS** 

22 Oct - 17 Dec 2009 No Major Changes.

AIRPORTS

22 Oct - 17 Dec 2009 No Major Changes.

NAVAIDS

22 Oct - 17 Dec 2009 No Major Changes.

AIRSPACE

22 Oct - 17 Dec 2009 No Major Changes.

**SPECIAL USE AIRSPACE** 

22 Oct - 17 Dec 2009 No Major Changes.

MILITARY TRAINING ROUTES

22 Oct - 17 Dec 2009 No Major Changes.

**MISCELLANEOUS** 

22 Oct - 17 Dec 2009 No Major Changes.

## CF-16 WORLD AERONAUTICAL CHART 38th Edition, 15 Jan 2009

**OBSTRUCTIONS** 

12 Mar 2009 - 17 Dec 2009 No Major Changes.

AIRPORTS

12 Mar 2009 - 17 Dec 2009 No Major Changes.

NAVAID:

12 Mar 2009 Change ROME VORTAC freq from 122.5 to 112.5, 42°35'26"N, 117°52'05"W.

**7 May 2009 – 17 Dec 2009** No Major Changes.

**AIRSPACE** 

12 Mar 2009 - 17 Dec 2009 No Major Changes.

SPECIAL USE AIRSPACE

12 Mar 2009 - 17 Dec 2009 No Major Changes.

**MILITARY TRAINING ROUTES** 

12 Mar 2009 - 17 Dec 2009 No Major Changes.

MISCELLANEOUS

12 Mar 2009 - 17 Dec 2009 No Major Changes.

## CG-19 WORLD AERONAUTICAL CHART 39th Edition. 4 Jun 2009

### OBSTRUCTIONS

2 Jul 2009 - 17 Dec 2009 No Major Changes.

#### **AIRPORTS**

2 Jul 2009 Add arpt elev 1071, lighting code \*L, runway length 71 and unicom at GLENDALE arpt, 33°31′36″N, 112°<sup>:</sup>17′42″W

27 Aug 2009 - 17 Dec 2009 No Major Changes.

#### **NAVAIDs**

2 Jul 2009 - 17 Dec 2009 No Major Changes.

#### **AIRSPACE**

2 Jul 2009 - 17 Dec 2009 No Major Changes.

#### SPECIAL USE AIRSPACE

2 Jul 2009 - 17 Dec 2009 No Major Changes.

#### MILITARY TRAINING ROUTES

2 Jul 2009 - 17 Dec 2009 No Major Changes.

#### MISCELLANEOUS

2 Jul 2009 - 17 Dec 2009 No Major Changes.

## CHEYENNE SECTIONAL 80th Edition, 30 Jul 2009

#### **OBSTRUCTIONS**

27 Aug 2009 Add windmill farm. 6365'UC is highest MSL, 43°04'40"N, 105°50'43"W. Add obst 6988'MSL (407'AGL)UC, 41°0823"N, 104°59'52"W. **22 Oct 2009** Add obst 7523'MSL (263'AGL)UC, 41°3915"N, 106°04'16"W.

Add obst 7508'MSL (391'AGL)UC, 41°40'22"N, 105°59'52"W.

Add obst 5157'MSL (258'AGL)UC, 42°41'04"N, 103°55'53"W.

17 Dec 2009 Add obst 6584'MSL (363'AGL)UĆ, 41°10'42"N, 104°53'05"W. Add obst 5047'MSL (350'AGL)UC, 41°38'30"N, 104°08'23"W.

Add obst 5078'MSL (341'AGL)UC, 43°43'57"N, 105°21'49"W. Add obst 5208'MSL (305'AGL)UC, 43°24'53"N, 106°15'06"W.

Add obst 7127'MSL (262'AGL)UC, 41°57'30"N, 106°26'20"W.

#### **AIRPORTS**

## 27 Aug 2009 -22 Oct 2009 No Major Changes.

17 Dec 2009 Change RP 12 to RP 13 at BLACK HILLS-CLYDE ICE arpt, 44°28'52"N, 103°47'09"W. Change CTAF 122.8 to 122.9 at SOUTH BIG HORN CO arpt, 44°31′00″N, 108°04′58″W.

**27 Aug 2009** Delete ANTELOPE NDB, 41°36′15″N, 109°00′06″W. **22 Oct 2009 – 17 Dec 2009** No Major Changes.

27 Aug 2009 Add RUSHVILLE, NE Class E: That airspace extending upward from 700 feet above the surface within a 7.3–mile radius of Modisett airport. **22 Oct 2009 – 17 Dec 2009** No Major Changes.

## SPECIAL USE AIRSPACE

27 Aug 2009 - 17 Dec 2009 No Major Changes.

#### MILITARY TRAINING ROUTES

27 Aug 2009 - 17 Dec 2009 No Major Changes.

#### **MISCELLANEOUS**

27 Aug 2009 - 17 Dec 2009 No Major Changes.

## DENVER SECTIONAL 81st Edition. 30 Jul 2009

## **OBSTRUCTIONS**

27 Aug 2009 Add obst 6498'MSL (455'AGL)UC, 39°54'22"N, 105°13'31"W.

22 Oct 2009 No Major Changes.

17 Dec 2009 Add obst 6846'MSL (235'AGL)UC, 39°57'14"N, 108°18'47"W.

#### AIRPORT

27 Aug 2009 No Major Changes.

22 Oct 2009 Delete GANADO arpt, 35°42'06"N, 109°31'00"W.

Delete GHOST arpt, 36°18'10"N, 106°29'17"W.

17 Dec 2009 LA MESA PARK arpt abandoned, 36°51'25"N, 104°26'52"W.

#### ΝΔΥΔΙΠο

27 Aug 2009 - 17 Dec 2009 No Major Changes.

#### **AIRSPACE**

27 Aug 2009 No Major Changes.

22 Oct 2009 Revise MONTROSE, CO Class E5: That airspace extending upward from 700 feet above the surface within a 7.2-mile radius of the Montrose Regional Airport and within 4.3 miles northeast and 8.3 miles southwest of the Montrose VOR/DME 313° and 133° radials extending from 7.2 miles southeast to 21.4 miles northwest of the VOR/DME, and within 4 miles each side of the Montrose VOR/DME 360° radial extending to 13.6 miles north of the VOR/DME; and that airspace extending upward from 1,200 feet above the surface within an area bounded by a point beginning at 38°40′00″ N, 108°46′00″ W; to 38°25′00″ N, 108°42′30″ W; to 37°58′00″ N, 108°10′00″ W; to 38°09′00″ N, 107°35′00″ W; to 38°43′00″ N, 107°39′30″ W; to 38°51′30″ N, 107°41′00″ W; to 39°01′00″ N, 108°47′00″ W; to 39°01′00″ N, 108°09′00″ W; thence to the point of beginning.

17 Dec 2009 Revise PUEBLÖ, CO Class E: That airspace extending upward from 700 feet above the surface within 21.8-mile radius of the Pueblo Memorial Airport, and within the 28.8-mile radius of Pueblo Memorial Airport clockwise between the 070° and 133° bearing from the airport; that airspace extending upward from 1,200 feet above the surface bounded on the north by 38°30'00″N, on the east by V-169, on the south by V-210, on the west by a line from 37°38'00″N, 105°00'02″W; to 38°09'25″N, 105°08'06″W; to 38°05'51″N, 105°03'49″W; to 38°00'00″N, 105°03'02″W; to 38°30'00″N, 105°33'02″W; that airspace extending upward from 13,700 feet MSL bounded by a line beginning at 38°09'25″N, 105°08'06″W; to 37°38'00″N, 105°00'02″W; to 37°34'00″N, 105°12'02″W; to 38°05'51″N, 105°30'49″W; thence to point of beginning, excluding that airspace within Federal airways and the Colorado Springs, CO, Class E airspace area.

#### SPECIAL USE AIRSPACE

27 Aug 2009 - 17 Dec 2009 No Major Changes.

#### MILITARY TRAINING ROUTES

27 Aug 2009 - 17 Dec 2009 No Major Changes.

### MISCELLANEOUS

27 Aug 2009 - 17 Dec 2009 No Major Changes.

## DENVER/COLORADO SPRINGS TERMINAL AREA CHART 72nd Edition, 30 Jul 2009

#### **OBSTRUCTIONS**

27 Aug 2009 Add obst 6498'MSL (455'AGL)UC, 39°54'22"N, 105°13'31"W.

22 Oct 2009 - 17 Dec 2009 No Major Changes.

#### **AIRPORTS**

27 Aug 2009 - 17 Dec 2009 No Major Changes.

#### NAVAIDS

27 Aug 2009 - 17 Dec 2009 No Major Changes.

#### AIRSPACE

27 Aug 2009 - 22 Oct 2009 No Major Changes.

17 Dec 2009 Revise PUEBLO, CO Class E: That airspace extending upward from 700 feet above the surface within 21.8-mile radius of the Pueblo Memorial Airport, and within the 28.8-mile radius of Pueblo Memorial Airport clockwise between the 070° and 133° bearing from the airport; that airspace extending upward from 1,200 feet above the surface bounded on the north by 38°30′00″N, on the east by V-169, on the south by V-210, on the west by a line from 37°38′00″N, 105°00′02″W; to 38°09′25″N, 105°08′06″W; to 38°05′51″N, 105°30′49″W; to 38°010″N, 105°33′02″W; to 38°30′00″N, 105°33′02″W; that airspace extending upward from 13,700 feet MSL bounded by a line beginning at 38°09′25″N, 105°08′06″W; to 37°38′00″N, 105°00′02″W; to 37°34′00″N, 105°12′02″W; to 38°05′51″N, 105°30′49″W; thence to point of beginning, excluding that airspace within Federal airways and the Colorado Springs, CO, Class E airspace area.

#### SPECIAL USE AIRSPACE

27 Aug 2009 - 17 Dec 2009 No Major Changes.

### **MILITARY TRAINING ROUTES**

27 Aug 2009 - 17 Dec 2009 No Major Changes.

## **MISCELLANEOUS**

27 Aug 2009 - 17 Dec 2009 No Major Changes.

## FI PASO SECTIONAL 83rd Edition, 30 Jul 2009

**OBSTRUCTIONS** 

**27** Aug 2009 No Major Changes. **22 Oct 2009** Add obst 4390'MSL (310'AGL)UC, 32°04'52"N, 106°16'32"W. Add obst 5015'MSL (250'AGL)UC, 30°23'40"N, 102°50'44"W.

17 Dec 2009 No Major Changes.

**AIRPORTS** 

27 Aug 2009 - 17 Dec 2009 No Major Changes.

27 Aug 2009 - 17 Dec 2009 No Major Changes.

27 Aug 2009 - 17 Dec 2009 No Major Changes.

**SPECIAL USE AIRSPACE** 

27 Aug 2009 - 17 Dec 2009 No Major Changes.

**MILITARY TRAINING ROUTES** 

27 Aug 2009 - 17 Dec 2009 No Major Changes.

**MISCELLANEOUS** 

27 Aug 2009 - 17 Dec 2009 No Major Changes.

## **GRAND CANYON VFR AERONAUTICAL CHART** 3rd Edition, 19 Apr 2001

**OBSTRUCTIONS** 

17 May 2001 - 17 Dec 2009 No Major Changes.

17 May 2001 - 10 May 2007 No Major Changes.

5 Jul 2007 Delete TASSI arpt, 36°15′09″N, 113°57′54″W.

Delete THE RANCH arpt, 36°00′37″N, 112°17′30″W. **30 Aug 2007 – 17 Dec 2009** No Major Changes.

**NAVAIDs** 

17 May 2001 - 17 Dec 2009 No Major Changes.

**AIRSPACE** 

17 May 2001 - 17 Dec 2009 No Major Changes.

SPECIAL USE AIRSPACE

17 May 2001 - 17 Dec 2009 No Major Changes.

MILITARY TRAINING ROUTES

17 May 2001 - 17 Dec 2009 No Major Changes.

17 May 2001 Blue Direct North (BDN) west bound route, add 10,500 with a westbound arrow above the 8,500 figure just west of Supal/Diamond Creek Sector boundary. 12 Jul 2001 – 17 Dec 2009 No Major Changes.

## KLAMATH FALLS SECTIONAL 81st Edition, 24 Sep 2009

#### OBSTRUCTIONS

22 Oct 2009 No Major Changes.

17 Dec 2009 Add obst 721'MSL (211'AGL), 43°31'58"N, 124°12'18"W.

#### AIRPORTS

22 Oct 2009 Delete RED & WHITE arpt, 43°07′09"N, 121°02′41"W.

Delete UNITY arpt, 44°27′05″N, 118°11′12″W.

17 Dec 2009 Delete CUBEHOLE arpt, 44°21′52″N, 122°57′30″W.

Delete WILSON arpt, 44°12′44″N, 120°31′26″W. Delete LAWEN arpt, 43°28′46″N, 118°49′51″W.

#### NAVAIDs

22 Oct 2009 - 17 Dec 2009 No Major Changes.

### **AIRSPACE**

**22 Oct 2009** Add NORTH BEND, OR Class D: That airspace extending upward from the surface to and including 2500 feet MSL within a 4.2-mile radius of the Southwest Oregon Regional Airport. This Class D airspace area is effective during the specific dates and times established in advance by a Notice to Airmen. The effective date and time will thereafter be continuously published in the Airport/Facility Directory.

17 Dec 2009 No Major Changes.

#### SPECIAL USE AIRSPACE

22 Oct 2009 - 17 Dec 2009 No Major Changes.

#### **MILITARY TRAINING ROUTES**

22 Oct 2009 - 17 Dec 2009 No Major Changes.

#### **MISCELLANEOUS**

22 Oct 2009 - 17 Dec 2009 No Major Changes.

## LAS VEGAS SECTIONAL 82nd Edition, 27 Aug 2009

#### **OBSTRUCTIONS**

27 Aug 2009 - 17 Dec 2009 No Major Changes.

#### AIRPORTS

27 Aug 2009 - 17 Dec 2009 No Major Changes.

## NAVAIDs

27 Aug 2009 - 17 Dec 2009 No Major Changes.

#### AIRSPACE

27 Aug 2009 - 22 Oct 2009 No Major Changes.

17 Dec 2009 Add airway V626 from MYTON VOR/DME, (MTU)250° to FAIRFIELD VOTAC, (FFU)110°.

#### **SPECIAL USE AIRSPACE**

27 Aug 2009 - 17 Dec 2009 No Major Changes.

#### **MILITARY TRAINING ROUTES**

**27 Aug 2009 – 17 Dec 2009** No Major Changes.

#### MISCELLANEOUS

27 Aug 2009 - 17 Dec 2009 No Major Changes.

# LAS VEGAS TERMINAL AREA CHART 71st Edition, 27 Aug 2009

#### **OBSTRUCTIONS**

27 Aug 2009 - 17 Dec 2009 No Major Changes.

#### **AIRPORTS**

27 Aug 2009 - 17 Dec 2009 No Major Changes.

#### NAVAID:

**27 Aug 2009 - 17 Dec 2009** No Major Changes.

#### AIRSPACE

27 Aug 2009 - 17 Dec 2009 No Major Changes.

### SPECIAL USE AIRSPACE

27 Aug 2009 - 17 Dec 2009 No Major Changes.

## MILITARY TRAINING ROUTES

27 Aug 2009 - 17 Dec 2009 No Major Changes.

#### **MISCELLANEOUS**

27 Aug 2009 - 17 Dec 2009 No Major Changes.

## LOS ANGELES HELICOPTER ROUTE CHART 8th Edition, 22 Dec 2005

#### **OBSTRUCTIONS**

22 Dec 2005 - 13 Apr 2006 No Major Changes.

8 Jun 2006 Add group obst 405 MSL(390 AĞL)UC, 33°43'39"N, 118°14'19"W. 3 Aug 2006 – 15 Jan 2009 No Major Changes.

12 Mar 2009 Add obst 421'MSL (348'AGL), 33°53'39"N, 118°13'31"W.

**7 May 2009 – 17 Dec 2009** No Major Changes.

22 Dec 2005 - 3 Aug 2006 No Major Changes.

28 Sep 2006 Delete METHODIST heliport, 34°08'00"N, 118°02'33"W.

Delete SAN PEDRO PENINSULA heliport, 33°44'19"N, 118°18'38"W.

23 Nov 2006 - 30 Aug 2007 No Major Changes.

25 Oct 2007 Delete ANAHEIM POLICE heliport, 33°49'35"N, 117°54'05"W.

20 Dec 2007 - 20 Nov 2008 No Major Changes.

15 Jan 2009 Add SAN BERNARDINO INTL ATCT 119.45, 34°05′43″N, 117°14′06″W.

EL TORO MCAS arpt abandoned, 33°40′34″N, 117°43′52″W.

Change CTAF freq 122.975 to 119.45 at SAN BERNARDINO INTL arpt, 34°05′43″N, 117°14′06″W. **12 Mar 2009 – 17 Dec 2009** No Major Changes.

#### **NAVAIDs**

22 Dec 2005 - 15 Jan 2009 No Major Changes.

12 Mar 2009 Change RIVERSIDE VOR position from 33°57'07"N, 117°26'57"W to 33°57'19"N, 117°26′59″W, and magnetic variation from 15E to 14E. **7 May 2009 – 17 Dec 2009** No Major Changes.

#### **AIRSPACE**

22 Dec 2005 - 25 Sep 2008 No Major Changes.

20 Nov 2008 Add SAN BERNARDINO, CA Class D: That airspace extending upward from the surface to and including 3200 feet MSL beginning at  $34^{\circ}08'09''N$ ,  $117^{\circ}18'40''W$ ; to  $34^{\circ}08'09''N$ ,  $117^{\circ}11'13''W$ ; to  $34^{\circ}07'42''N$ ,  $117^{\circ}10'26''W$ ; to  $34^{\circ}02'24''N$ ,  $117^{\circ}10'26''W$ ; thence via the 4.5 nautical mile radius of the San Bernardino Airport clockwise to the point of beginning. This Class D airspace area is effective during the specific dates and times established in advance by a Notice to Airmen. The effective dates and times will thereafter be continuously published in the Airport/Facility Directory. **15 Jan 2009 – 2 Jul 2009** No Major Changes.

27 Aug 2009 Change SANTA ANA Class C freq from 380.2 to 279.575

22 Oct 2009 No Major Changes.

17 Dec 2009 Change ONTARIO INTL ATCT freq. from 385.6 to 360,775, 34°03'22"N, 117°36'04"W.

#### SPECIAL USE AIRSPACE

22 Dec 2005 - 17 Dec 2009 No Major Changes.

#### MILITARY TRAINING ROUTES

22 Dec 2005 - 17 Dec 2009 No Major Changes.

22 Dec 2005 - 8 Jun 2006 No Major Changes.

3 Aug 2006 Change MEF  $0^5$  to  $0^6$  in quadrant  $33^\circ30'-33^\circ45'N$ ,  $118^\circ00'-118^\circ15'W$ . 28 Sep 2006 – 17 Dec 2009 No Major Changes.

## LOS ANGELES SECTIONAL 86th Edition, 17 DEC 2009

#### **OBSTRUCTIONS**

17 Dec 2009 No Major Changes.

# **AIRPORTS**

17 Dec 2009 No Major Changes.

17 Dec 2009 No Major Changes.

#### **AIRSPACE**

17 Dec 2009 No Major Changes.

#### SPECIAL USE AIRSPACE

17 Dec 2009 No Major Changes.

#### MILITARY TRAINING ROUTES

17 Dec 2009 No Major Changes.

#### **MISCELLANEOUS**

17 Dec 2009 No Major Changes.

## LOS ANGELES TERMINAL AREA CHART 60th Edition, 17 Dec 2009

**OBSTRUCTIONS** 

17 Dec 2009 No Major Changes.

**AIRPORTS** 

17 Dec 2009 No Major Changes.

**NAVAIDs** 

17 Dec 2009 No Major Changes.

**AIRSPACE** 

17 Dec 2009 No Major Changes.

SPECIAL USE AIRSPACE

17 Dec 2009 No Major Changes.

**MILITARY TRAINING ROUTES** 

17 Dec 2009 No Major Changes.

**MISCELLANEOUS** 

17 Dec 2009 No Major Changes.

## PHOENIX SECTIONAL 82nd Edition, 22 Oct 2009

**OBSTRUCTIONS** 

22 Oct 2009 No Major Changes.

17 Dec 2009 Add obst 6479 MSL (417 AGL)UC, 34°38'19"N, 110°18'56"W.

AIRPORTS

22 Oct 2009 - 17 Dec 2009 No Major Changes.

NAVAIDs

22 Oct 2009 - 17 Dec 2009 No Major Changes.

**AIRSF** 

22 Oct 2009 No Major Changes.

17 Dec 2009 Revise LAKE HÄVASU, AZ. Class E: That airspace extending upward from 700 feet above the surface within a 6.7-mile radius of Lake Havasu City Airport and within 1 mile each side of the Lake Havasu City Airport 150° bearing extending from the 6.7-mile radius to 13 miles southeast of the Lake Havasu City Airport, excluding that airspace with a 2.3-mile radius of Chemehuevi Valley Airport. That airspace extending upward from 1,200 feet above the surface bounded by a line beginning at 34°42′47″N, 114°29′37″W; to 34°42′47″N, 114°12′06″W; to 34°23′00″N,114°12′06″W; to 34°17′19″N, 114°32′12″W; thence to the point of beginning.

SPECIAL USE AIRSPACE

22 Oct 2009 - 17 Dec 2009 No Major Changes.

MILITARY TRAINING ROUTES

22 Oct 2009 - 17 Dec 2009 No Major Changes.

**MISCELLANEOUS** 

22 Oct 2009 - 17 Dec 2009 No Major Changes.

## PHOENIX TERMINAL AREA CHART 41st Edition, 22 Oct 2009

**OBSTRUCTIONS** 

22 Oct 2009 - 17 Dec 2009 No Major Changes.

22 Oct 2009 - 17 Dec 2009 No Major Changes.

22 Oct 2009 - 17 Dec 2009 No Major Changes.

22 Oct 2009 - 17 Dec 2009 No Major Changes.

SPECIAL USE AIRSPACE

22 Oct 2009 - 17 Dec 2009 No Major Changes.

**MILITARY TRAINING ROUTES** 

22 Oct 2009 - 17 Dec 2009 No Major Changes.

**MISCELLANEOUS** 

22 Oct 2009 - 17 Dec 2009 No Major Changes.

# SALT LAKE CITY HELICOPTER ROUTE CHART 3rd Edition, 26 Oct 2006

OBSTRUCTIONS

23 Nov 2006 - 17 Dec 2009 No Major Changes.

23 Nov 2006 - 10 Apr 2008 No Major Changes.

**5 Jun 2008** Delete PAYNE arpt, 41°05′54″N, 112°06′56″W. Delete WARD heli, 40°35′59″N, 111°48′03″W.

31 Jul 2008 - 25 Sep 2008 No Major Changes.

20 Nov 2008 Delete CHANNEL 4 heli, 40°43'57"N, 111°57'20"W.

15 Jan 2009 - 17 Dec 2009 No Major Changes.

23 Nov 2006 - 17 Dec 2009 No Major Changes.

**AIRSPACE** 

23 Nov 2006 - 17 Dec 2009 No Major Changes.

**SPECIAL USE AIRSPACE** 

23 Nov 2006 - 17 Dec 2009 No Major Changes.

**MILITARY TRAINING ROUTES** 

23 Nov 2006 - 17 Dec 2009 No Major Changes.

23 Nov 2006 - 17 Dec 2009 No Major Changes.

## SALT LAKE CITY SECTIONAL 82nd Edition, 22 Oct 2009

## **OBSTRUCTIONS**

22 Oct 2009 No Major Changes.

17 Dec 2009 Change obst from 6143'MSL (302'AGL) to 6214'MSL (345'AGL), 42°51'46"N, 112°31′06"W.

#### **AIRPORTS**

22 Oct 2009 - 17 Dec 2009 No Major Changes.

22 Oct 2009 - 17 Dec 2009 No Major Changes.

22 Oct 2009 No Major Changes.

17 Dec 2009 Add airway V626 from MYTON VOR/DME, (MTU)250° to FAIRFIELD VOTAC, (FFU) 110°.

#### SPECIAL USE AIRSPACE

22 Oct 2009 - 17 Dec 2009 No Major Changes.

#### **MILITARY TRAINING ROUTES**

22 Oct 2009 - 17 Dec 2009 No Major Changes.

#### **MISCELLANEOUS**

22 Oct 2009 - 17 Dec 2009 No Major Changes.

## SALT LAKE CITY TERMINAL AREA CHART 41st Edition, 22 Oct 2009

#### **OBSTRUCTIONS**

22 Oct 2009 - 17 Dec 2009 No Major Changes.

22 Oct 2009 - 17 Dec 2009 No Major Changes.

#### **NAVAIDs**

22 Oct 2009 - 17 Dec 2009 No Major Changes.

#### **AIRSPACE**

22 Oct 2009 - 17 Dec 2009 No Major Changes.

#### SPECIAL USE AIRSPACE

22 Oct 2009 - 17 Dec 2009 No Major Changes.

#### **MILITARY TRAINING ROUTES**

22 Oct 2009 - 17 Dec 2009 No Major Changes.

## **MISCELLANEOUS**

22 Oct 2009 - 17 Dec 2009 No Major Changes.

## SAN DIEGO TERMINAL AREA CHART 59th Edition, 17 Dec 2009

## **OBSTRUCTIONS**

17 Dec 2009 No Major Changes.

#### **AIRPORTS**

17 Dec 2009 No Major Changes.

17 Dec 2009 No Major Changes.

17 Dec 2009 No Major Changes.

### SPECIAL USE AIRSPACE

17 Dec 2009 No Major Changes.

#### **MILITARY TRAINING ROUTES**

17 Dec 2009 No Major Changes.

#### **MISCELLANEOUS**

17 Dec 2009 No Major Changes.

## SAN FRANCISCO SECTIONAL 83rd Edition, 27 Aug 2009

#### **OBSTRUCTIONS**

27 Aug 2009 - 17 Dec 2009 No Major Changes.

27 Aug 2009 No Major Changes. 22 Oct 2009 Change CTAF 122.95 to 122.9 at BROWNSVILLE arpt, 39°27′18″N, 121°17′29″W.

17 Dec 2009 No Major Changes.

27 Aug 2009 No Major Changes.

22 Oct 2009 Delete LAMPSON NDB, 38°59'43"N, 122°53'01"W.

17 Dec 2009 No Major Changes.

#### **AIRSPACE**

27 Aug 2009 - 22 Oct 2009 No Major Changes.

17 Dec 2009 Add LITTLE RIVER, CA Class E: That airspace extending upward from 700 feet above the surface within a 6.6-mile radius of Little River Airport.

## SPECIAL USE AIRSPACE

27 Aug 2009 - 17 Dec 2009 No Major Changes.

## **MILITARY TRAINING ROUTES**

27 Aug 2009 - 17 Dec 2009 No Major Changes.

#### **MISCELLANEOUS**

27 Aug 2009 - 17 Dec 2009 No Major Changes.

## SAN FRANCISCO TERMINAL AREA CHART 75th Edition. 27 Aug 2009

OBSTRUCTIONS
27 Aug 2009 – 17 Dec 2009 No Major Changes.
AIRPORTS
27 Aug 2009 – 17 Dec 2009 No Major Changes.
NAVAIDs
27 Aug 2009 – 17 Dec 2009 No Major Changes.
AIRSPACE
27 Aug 2009 – 17 Dec 2009 No Major Changes.
SPECIAL USE AIRSPACE
27 Aug 2009 – 17 Dec 2009 No Major Changes.

MILITARY TRAINING ROUTES

27 Aug 2009 - 17 Dec 2009 No Major Changes.

**MISCELLANEOUS** 

**27 Aug 2009 - 17 Dec 2009** No Major Changes.

27 Aug 2009 - 17 Dec 2009 No Major Changes.

## WICHITA SECTIONAL 83rd Edition, 30 Jul 2009

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OBSTRUCTIONS
27 Aug 2009 Add obst 2930'MSL (350'AGL)UC, 39°50'12"N, 100°10'48"W. Add obst 1665'MSL
(310'AGL)UC, 37°57'55"N, 97°09'08"W. Add obst 2636'MSL (350'AGL)UC, 39°49'30"N, 99°35'27"W.
22 Oct 2009 Add obst 1641'MSL (238'AGL), 37°59'00"N, 96°52'21"W. Add obst 1782'MSL (260'AGL), 37°56'06"N, 97°51'53"W. Add obst 1604'MSL (314'AGL), 37°30'30"N, 97°11'19"W.
Add obst 2978'MSL (350'AGL)UC, 36°19'02"N, 100°15'34"W.
Add obst 3298'MSL (315'AGL)UC, 38°55'12"N, 101°11'02"W.
Add obst 1588'MSL (320'AGL)UC, 37°29'57"N, 97°30'51"W.
17 Dec 2009 Add obst 4645'MSL (350'AGL)UC, 38°49'03"N, 102°22'02"W. Add obst 4549'MSL (350'AGL)UC, 39°03'34"N, 102°15'35"W.
Add obst 5259'MSL (350'AGL)UC, 37°22'54"N, 102°54'22"W.
Add obst 4300'MSL (350'AGL)UC, 37°22'52"N, 102°17'06"W. Add obst 1620'MSL (310'AGL), 39°40'47"N, 96°45'01"W.
Add obst 1737'MSL (260'AGL), 37°53'35"N, 97°46'18"W.
Add obst 1947'MSL (310'AGL), 38°40'41"N, 97°58'53"W.
Add obst 1694'MSL (349'AGL)UC, 36°24'21"N, 98°21'05"W.
Add obst 2684'MSL (415'AGL)UC, 36°20'21"N, 99°32'08"W. Add obst 2406'MSL (315'AGL)UC, 37°57'52"N, 99°06'48"W.
Add obst 3840'MSL (262'AGL)UC, 37°52'52"N, 102°00'15"W.
Add obst 3715'MSL (350'AGL)UC, 39°46'58"N, 101°22'34"W. Add obst 1512'MSL (349'AGL)UC, 36°52'05"N, 97°36'27"W. Add obst 2553'MSL (320'AGL)UC, 40°08'35"N, 99°49'29"W.
AIRPORTS
27 Aug 2009 No Major Changes.
22 Oct 2009 Change CTAF/UNICOM freq to 123.075 at STEARMAN arpt, 37°46'30"N, 97°06'47"W.
17 Dec 2009 No Major Changes.
NAVAIDs
27 Aug 2009 - 17 Dec 2009 No Major Changes.
AIRSPACE
27 Aug 2009 - 17 Dec 2009 No Major Changes.
SPECIAL USE AIRSPACE
27 Aug 2009 - 17 Dec 2009 No Major Changes.
MILITARY TRAINING ROUTES
27 Aug 2009
IR-526 Revised
IR-513 Revised
IR-504 Revised
22 Oct 2009 - 17 Dec 2009 No Major Changes.
MISCELLANEOUS
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## SUPPLEMENTAL COMMUNICATION REFERENCE

Contained within this tabulation, and listed alphabetically by airport name, are all private—use airports charted on the U.S. IFR Enroute Low and High Altitude charts in the United States, having terminal approach and departure control facilities. Additionally, listed by country, are all Canadian and Mexican airports that appear on the U.S. IFR Enroute charts with approach and departure control services. All frequencies transmit and receive unless otherwise noted. Radials defining sectors are outbound from the facility.

IIN	пъ	II ST	2TFS

OHITED OTHES	CHART & PANEL
	L-28H
5.6	2 20
0.0	H-1E, 2F, L-13D
126 85 305 2	12, 21, 2 100
	L-10F
0000)	2 101
	L-16I
33 65 292 15	
	H-8I, L-23C
n-Fri 1300-21007±)	,
CANADA	CHART & PANEL
	H-1B, L-12F
	11-15, L-121
7 (Avbl on ground) 290 8	
-, (Ghapo megalar to 4500 )	H-11B
25.9	II-TID
20.0	L-14I
ound station)	L-141
	H-11B, L-31D
123)	11-110, 1-510
4.025	
	L-31C
2 65	L-310
2.00	L-32J
34.25	L-323
04.20	H-1B, L-1E
	11 10, 2 12
363.8	
oo . vanoouver mm 120.2 above 2000 . onape	
	L-31D
2 252 1	L-31D
0 200.1	H-2H
32 25 285 4	11-211
.02.20 200.4	
	L-31D
27	2 015
	L-32G
	2 024
5.110.10	L-32G
32 35 MF 122 15 (5 NM to 3400')	L-32d
32.00 IIII 122.10 (0 IIIII to 0400 )	L-31D
9.3.253.1	£ 31b
.0.0 200.1	H-1C
134 2 227 3	11-10
107.2 221.0	
	H-10G, 11B, L-31D
5 30	11-10G, 11B, L-31D
	H-11E, L-32J
35 65 384 8 MF 118 0 (5 NM +5 2200/)	11-11L, L-32J
33.03 307.0 IVII 110.0 I3 IVIVI IU 3200 I	
	H-10G, L-30G
	5.6  1.26.85 305.2  1.20.85 305.2  1

COLLITY NAME  Collingwood, ON (CNY3)	CHART & PANE H-11B, L-31
Toronto Center App/Dep Con 124.02	11–116, 1–311
Cornwall Rgnl, ON (CYCC)	L-320
Boston Center App/Dep Con 135.25 377.1	L-320
Cranbrook/Canadian Rockies Intl, BC (CYXC)	H-10
Vancouver Center App/Dep Con 133.6 MF 122.3 (5 NM to 6100')	
Debert, NS (CCQ3)	H-11E, L-32
Halifax Trml App/Dep Con 119.2	,
Dighy, NS (CYID)	L-32.
Moncton Center App/Dep Con 123.9	
Downsview, ON (CYZD)	H-11B, L-31
Toronto Center App Con 133.4	
Toronto Center Dep Con 133.4	
MF 126.2 (1300-2300Z‡, 3 NM to 1700')	
Drummondville, QC (CSC3)	L-321
Montreal Center App/Dep Con 132.35	
Earlton (Timiskaming Rgnl), ON (CYXR)	H-11E
MF 122.0 (5 NM to 3800')	
AWOS 128.6	
Elliot Lake Muni, ON (CYEL)	L-310
Toronto Center App/Dep Con 135.4	
Fort Frances Muni, ON (CYAG)	L-14H
Minneapolis Center App/Dep Con 120.9	
Fredericton Intl, NB (CYFC)	H-11E, L-32
ATIS 127.55	
Moncton Center App/Dep Con 124.3 135.5 270.8	
Tower 119.0 (1200–2000Z, DT 1100–1900Z) Gnd Con 121.7 (Ltd hrs)	
MF 119.0 (2000–1200Z, DT 1900–1100Z 5 NM to 3500')	
Goderich, ON (CYGD)	H-11B, L-31
Toronto Center App/Dep 135.3 266.3	
Greenwood, NS (CYZX)	H-11E, L-32.
ATIS 128.85 244.3 (1100-0000Z‡)	
App/Dep Con 120.6 335.9 Tower 119.5 126.2 236.6 324.3	
Gnd Con 133.75 289.4 Clnc Del 128.05 283.9	
Grimsby Air Park, ON (CNZ8)	L-318
Toronto Trml App/Dep Con 128.27 268.75 Tower 125.0 308.475	
Halifax/Shearwater, NS (CYAW)	H-11E, L-32.
ATIS 129.175 (Ltd hrs)	
App/Dep Con 119.2 Tower 119.0 126.2 340.2 360.2 (Ltd hrs)	
Gnd Con 121.7 250.1	
Halifax/Stanfield Intl, NS (CYHZ)	H-11E, L-32
ATIS 121.0	
Moncton Center App/Dep Con 118.7 119.2 128.55 135.3 225.2 363.8	
Tower 118.4 236.6 Gnd Con 121.9 275.8 Clnc Del 123.95	
Apron Advisory 122.125	
Hamilton, ON (CYHM)	H-10H, 11B, L-11E
ATIS 128.1	
Toronto Trml App/Dep Con 128.27 268.75 Tower 119.7 125.0	
Gnd Con 121.6	11 4/0 1 0/5 55
Kingston, ON (CYGK)	H-11C, L-31E, 32
Montreal Center App/Dep Con 135.05 398.4 (0400–1115Z‡)	
MF 122.5 (1115–0400Z‡ 5 NM to 3300′)	
Kitchener/Waterloo, ON (CYKF)	H-11B, L-31
ATIS 125.1 (1200–0400Z‡)	
Toronto Trml App/Dep Con 128.275	
Waterloo Tower 126.0 118.55 (1200–0400Z‡) Gnd Con 121.8	
MF 126.0 (0400–1200Z‡ 5 NM to 4000′)	1 00
Lachute, QC (CSE4)	L-32
Montreal Center App Con 124.65 132.85 268.3	
Montreal Center Dep Con 132.85 268.3	
La Tuque, QC (CYLQ)	H-11
Montreal Center App/Dep Con 134.5	
Langley, BC (CYNJ)	L-11
ATIS 124.5 (1630-0230Z, DT 1530-0330Z)	
Victoria Trml 132.7 290.8 Tower 119.0 (1630–0230Z, DT 1530–0330Z) Gnd Con 121.9 MF 119.0 (0230–1630Z, DT 0330–1530Z 3 NM to 1900')	

:ILITY NAME .eamington, ON (CLM2)	CHART & PANI L-30
Cleveland Center App/Dep Con 132.45	
ethbridge, AB (CYQL)	H-1
ATIS 124.4 (1300-0545Z‡)	
Edmonton Center App/Dep Con 132.75 265.2 MF 121.0 (5 NM to 6000')	
indsay, ON (CNF4)	L-31E, L-32
Toronto Center App/Dep 134.25	1.20
iverpool/South Shore Rgnl, NS (CYAU)  Moncton Center App/Dep Con 123.9	L-32
ondon, ON (CYXU)	H-10G, 11I
ATIS 127.8 (1120–0345Z‡)	L-30G, 31
Toronto Center App/Dep 135.3 135.625	,
Tower 119.4 125.65 (1120-0345Z‡) Gnd Con 121.9	
MF 119.4 (0345-1120Z‡ 5 NM to 3000')	
Manitowaning/Manitoulin East Muni, ON (CYEM)	L-31
Toronto Center App/Dep 135.4 260.9	
Maniwaki, QC (CYMW)	L-32
Montreal Center App/Dep Con 126.57	
Mascouche, QC (CSK3)	L-32
MF 122.35 (5 NM to 2500'. No gnd station. Excluding the portion S of the	
N shore of Riviere des Milles-lles and 1 NM around Lac Agile Mascouche arpt.)  Medicine Hat, AB (CYXH)	H-1
AWOS 124.875 (0345–1245Z‡)	11-2
MF 122.2 (1245–0345Z‡ 5 NM to 5400')	
Midland/Huronia, ON (CYEE)	L-31
Toronto Center App/Dep 124.025	
Miramichi, NB (CYCH)	H-11E, L-3
Moncton Center App/Dep Con 123.7	
Moncton/Greater Moncton Intl, NB (CYQM)	H-11E, L-3
ATIS 128.65	
App/Dep 124.4 Tower 120.8 236.6 Gnd Con 121.8 275.8	
Apron Advisory 122.075	
Mont-Laurier, QC (CSD4)	L-32
Montreal Center App/Dep Con 126.57	11 110 101 1 20
Montreal Inti (Mirabel), QC (CYMX)  ATIS 125.7	H-11C, 12K, L-32
Montreal Center App Con 124.65 132.85 268.3	
Montreal Dep Con 132.85	
MF 119.1 (7 NM shape irregular to 2000') VFR Advisory 134.15	
Montreal/Pierre Elliott Trudeau Intl, QC (CYUL)	H-11C, 12K, L-32
ATIS 133.7	
Montreal Trml App Con 118.9 124.65 126.9 132.85 268.3	
Tower 119.9 267.1 Gnd Con 121.9 275.8 Clnc Del 125.6 Apron 122.075	
Montreal Trml Dep Con 118.9 (SE-S-SW) 124.65 268.3 (W-NW-NE)	
VFR Advisory 134.15	
Montreal/St-Hubert, QC (CYHU)	H-11C, L-32
ATIS 124.9 (Apr-Oct 1045-0500Z‡, Nov-Mar 1045-0400Z) AWOS 124.9	
Montreal Center App/Dep Con 125.15 268.3	
St. Hubert Tower 118.4 (Apr-Oct 1045–0500Z‡, Nov-Mar 1045–0400Z)  Gnd Con 126.4 MF 118.4 (Apr-Oct 0500–1045Z‡, Nov-Mar	
0400–1045Z 5 NM shape irregular to 2500') VFR Advisory 134.15	
Muskoka, ON (CYOA)	H-11B, L-31
AWOS 124.575	115, 2 0
MF 122.3 (5 NM to 3900')	
Manaimo, BC (CYCD)	H-1B, L-:
Victoria Trml App/Dep 120.8 133.95 252.3 MF 122.1 1330-0530Z‡ (5 NM to 2500')	
	H-11B, L31
North Bay, ON (CYYB)	
lorth Bay, ON (CYYB) ATIS 124.9 (1130-0300Z‡)	
lorth Bay, ON (CYYB) ATIS 124.9 (1130-0300Z‡) Toronto Center App/Dep 121.225 127.25	
lorth Bay, ON (CYYB) ATIS 124.9 (1130-0300Z‡) Toronto Center App/Dep 121.225 127.25 MF 118.3 (1130-0330Z‡ 7 NM to 5000')	
Orth Bay, ON (CYYB)  ATIS 124.9 (1130-0300Z‡)  Toronto Center App/Dep 121.225 127.25  MF 118.3 (1130-0330Z‡ 7 NM to 5000')  Oshawa, ON (CYOO)	L-3:
Horth Bay, ON (CYYB)  ATIS 124.9 (1130-0300Z‡)  Toronto Center App/Dep 121.225 127.25  MF 118.3 (1130-0330Z‡ 7 NM to 5000′)  Shawa, ON (CYOO)  ATIS 125.675 (1130-0330Z‡)	L-31
Orth Bay, ON (CYYB)  ATIS 124.9 (1130-0300Z‡)  Toronto Center App/Dep 121.225 127.25  MF 118.3 (1130-0330Z‡ 7 NM to 5000')  Oshawa, ON (CYOO)	L-31

CILITY NAME	CHART & PANE
Ottawa/Carp, ON (CYRP)	L-31E, 32I
ATIS 121.15	
Ottawa Trml App/Dep Con 128.175 252.5	
Ottawa/Gatineau, QC (CYND)	H-11C, L-320
Ottawa Trml App/Dep Con 127.7 128.175 252.5	
MF 122.3 (5 NM shape irregular to 2500')	
VFR Advisory Ottawa Trml 127.7	
Ottawa/MacDonald-Cartier Intl, ON (CYOW)	L-110
ATIS 121.15	
Ottawa App Con 135.15 Tower 118.8 120.1 341.3	
Gnd Con 121.9 Clnc Del 119.4	
Ottawa Dep Con 128.175	
Owen Sound/Billy Bishop Rgnl, ON (CYOS)	L-310
Toronto Center App/Dep 132.575 290.6	
Pelee Island, ON (CYPT)	L-30
Cleveland Center App/Dep Con 126.35 360.0	
Pembroke, ON (CYTA)	H-11C, L-31E, 32
Montreal Center App/Dep Con 135.2	
Petawawa Advisory 126.4 250.1 (Mon–Fri 1300–2130Z‡, OT PPR)	
Penticton, BC (CYYF)	H-1
Vancouver Center App/Dep Con 133.5 351.3 MF 118.5 (5 NM to 4100')	
Peterborough, ON (CYPQ)	H-11B, L-31E, 32
AWOS 126.925	
Toronto Center App/Dep 134.25	
Pincher Creek, AB (CZPC)	H-1
Edmonton Center App/Dep Con 132.75 265.2	
Pitt Meadows, BC (CYPK)	L-1
ATIS 125.0 (1500-0700Z‡)	
Vancouver Center App Con 128.6 352.7 (Outer)	
Pitt Tower 126.3 (1500–0700Z‡) Gnd Con 123.8	
Vancouver Center Dep Con 132.3 363.8 (South)	
MF 126.3 (0700–1500Z‡) (3NM to 2500′)	
Quebec/Jean Lesage Intl, QC (CYQB)	H-11D, L-32
ATIS 134.6	
Montreal Center App/Dep Con 124.0 127.85 135.025 270.9 322.8	
(185.65 Quebec Twr VFR acft at or below 3000') Tower 118.65 236.6	
Gnd Con 121.9 250.0	
Riviere Du Loup, QC (CYRI)	H-11
AWOS 122.025 (Pvt)	
Montreal Center App/Dep Con 125.1 299.6	
Rouyn Noranda, QC (CYUY)	H-11
Montreal Center App/Dep Con 125.9	
MF 122.2 (5 NM to 4000')	
Saint John, NB (CYSJ)	H-11E, L-32
Moncton Center App/Dep Con 124.3 135.5 270.8 MF 118.5 (5 NM to 3400')	
Sarnia (Chris Hadfield), ON (CYZR)	H-10G, 11B, L-30
Toronto Center 134.375	
Sault Ste Marie, ON (CYAM)	H-2K, L-31
ATIS 133.05 (1300-0100Z‡)	
Toronto Center App/Dep Con 132.65 344.5	
Tower 118.8 (1300-0100Z‡) Gnd Con 121.7	
MF 118.8 (0100–1300Z‡ 5 NM irregular shape to 3000′)	
Sherbrooke, QC (CYAM)	H-11D, L-32
AWOS 126.25	
Montreal Center App/Dep Con 132.55 MF 123.5 (Ltd hrs 5 NM to 3800')	
South Renfrew Muni, ON (CNP3)	L-31E, 32
Montreal Center App/Dep 124.275	
Southport, MB (CYPG)	H-21
ATIS 120.85 (Mon–Fri 1400–2300Z‡ except holidays)	
T 400 0 004 0 /4	
Tower 126.2 384.2 (Mon-Fri 1400-2300Z‡ except holidays)	

CILITY NAME Springwater Barrie Airpark, ON (CNA3)	CHART & PANI L-31
Toronto Center App/Dep Con 124.025	
St. Catherines/Niagara District, ON (CYSN)	H-10H, 11B, L-31
ATIS 128.525 (1215-0200Z‡)	
Toronto Trml App/Dep Con 133.4 253.1	
MF 123.25 (1215-0200Z‡ 5 NM to 3300')	
St. Frederic, QC (CSZ4)	L-32
Montreal Center App/Dep Con 135.025 270.9	
St. Georges, QC (CYSG)	H-32H, L-11
Montreal Center App/Dep Con 132.35	
MF 122.15 (5 NM 3900' ASL)	
St. Jean, QC (CYJN)	L-32
Montreal Center App/Dep Con 125.15 268.3	
Tower 118.2 (Apr-Oct 1230-0230Z‡ Nov-Mar 1300-0200Z‡)	
Gnd Con 121.7	II 24B 400 I 24
Sudbury, ON (CYSB)	H-31B, 10G, L-31
ATIS 127.4	
Toronto Center App/Dep Con 135.5 MF 125.5 (7 NM to 4000')	
Summerside, PE (CYSU)	H-11E, L-32
AWOS 122.55 (Pvt)	11-111, 1-32
Moncton Center App/Dep Con 124.4 384.8	
Thunder Bay, ON (CYQT)	H-2J, L-14
ATIS 128.8 (1100–0400Z‡)	11 25, 2 1
Winnipeg Center App/Dep Con 132.125 (0400–1100Z‡)	
Tower 118.1 (1100–0400Z‡) Gnd Con 121.9	
App/Dep 119.2 MF 118.1 (0400–1100Z‡ 5 NM to 4000')	
Timmins, ON (CYTS)	H-11
ATIS 124.95 (1000–0500Z‡)	
Toronto Center App/Dep Con 128.3 226.3 MF 122.3 (5 NM to 4000')	
Toronto/Buttonville Muni, ON (CYKZ)	L-31
ATIS 127.1 (1200-0400Z‡)	
Toronto Center App Con 133.4 Toronto Center Dep Con 133.4	
Tower 124.8 119.9 (1200-0400Z‡) Gnd Con 121.8	
MF 124.8 (0400-1200Z‡ No gnd station. 5 NM shape irregular to below 2500')	
Toronto/City Centre, ON (CYTZ)	L-31
ATIS 133.6 (1130-0400Z‡)	
App Con 133.4 Dep Con 133.4	
Tower 118.2 119.2 (1130-0400Z‡) Gnd Con 121.7	
Toronto/Lester B Pearson Intl, ON (CYYZ)	H-11B, L-31
ATIS 120.825	
App Con 124.475 125.4 132.8 Dep Con 127.575 128.8	
Tower 118.35 118.7 Gnd Con 118.0 119.1 121.65 121.9	
Clnc Del 121.3 (1200–0400Z‡) VFR Advisory 119.3 133.4	
Trenton, ON (CYTR)	H-11C, L-31E, 32
ATIS 135.45 257.7	
App/Dep Con 128.4 324.3 Tower 128.7 236.6 Gnd Con 121.9 275.8	
Cinc Del 124.35 286.4	
Trenton/Mountain View, ON (CPZ3)	H-11C, L-31E, 32
Trenton Mil Advisory 268.0	
Trois-Rivieres, QC (CYRQ)	H-11C, L-32
Montreal Center App/Dep Con 128.225 229.2	
MF 123.0 (5 NM to 3200')	
Val-D'or, QC (CYVO)	H-11
Montreal Center App/Dep Con 125.9 308.3	
MF 118.5 (1030–0325Z‡ 5 NM to 4000′)	11.45 1.4
Vancouver Intl, BC (CYVR)	H-1B, L-1
ATIS 124.6 124.75	
App Con 128.6 128.17 352.7 (Outer) 133.1 134.225 352.7 (Inner)	
Dep Con 126.125 (north) 132.3 (south) 363.8	
Tower 118.7 (south) 119.55 (north) VFR 124.0 125.65 226.5 236.6 Gnd Con 121.7 (south) 127.15 (north) 275.8 Clnc Del 121.4	

ACILITY NAME	CHART & PANEL
Victoria Intl, BC (CYYJ)	H-1B, L-1E
ATIS 118.8 (1400-0800Z‡)	
App Con 125.95 308.4 Dep Con 133.85 308.4	
Tower 119.1 (Outer) 119.7 (Inner) 239.6	
Gnd Con 121.9 361.4 (1400-0800Z‡ OT ctc Kamloops 119.7)	
Cinc Del 126.4 (1400-0800Z‡)	
Victoriaville, QC (CSR3)	L-32H
Montreal Center App Con 132.35	
Waterville/Kings Co Muni, NS (CCW3)	L-32J
Greenwood Trml App/Dep Con 120.6 335.9	
Greenwood Tower 119.5 324.3	
Wiarton, ON (CYVV)	H-11B, L-31D
Toronto Center App/Dep Con 132.575	
MF 122.2 (5 NM to 3700')	
Windsor, ON (CYQG)	H-10G, L-8J
ATIS 134.5 (1130-0330Z‡)	
Detroit App/Dep Con 126.85 127.5 134.3 348.3 363.2	
Tower 124.7 (1130–0330Z‡) Gnd Con 121.7	
MF 124.7 (0330–1130Z‡ 6 NM irregular shape to below 3000')	
VFR Advisory Detroit App Con 134.3	
Yarmouth, NS (CYOI)	H-11E, L-32I
Moncton Center App/Dep Con 123.9 368.5 MF 123.0 (5 NM to 3100')	111, 2 02,
MEXICO	
ACILITY NAME	CHART & PANEL
Abraham Gonzalez Intl (MMCS)	H-4K, L-6F
Juarez App Con 119.9 Juarez Tower 118.9	
Del Norte Intl (MMAN)	H-7B, L-20G
ATIS 127.55 (1300-0300Z‡)	
Monterrey App 119.75 120.4 Tower 118.6	
Durango Intl (MMDO)	H-7A
ATIS 132.1	
Tower 118.1 Durango Info 122.3	
General Abelardo L Rodriguez Intl (MMTJ)	H-4H, L-4H
ATIS 127.9	,
Tijuana App Con 119.5 120.3 Tijuana Tower 118.1 Clnc Del 122.35	
Tijuana Info 132.1	
General Lucio Blanco Intl (MMRX)	H-7B, L-20H
Reynosa App Con 118.8 Reynosa Tower 118.8	11-76, 1-2011
General Mariano Escobedo Intl (MMMY)	H-7B, L-20G
ATIS 127.7	11 75, 2 200
Monterrey App Con 119.75 120.4 Monterrey Tower 118.1 Gnd Con 121.9	
General R Fierro Villalobos Intl (MMCU)	L-61
ATIS 127.9	L-01
Chihuahua App Con 121.0 Chihuahua Tower 118.4  General Rodolfo Sanchez Tahoada Intl (MMML)	H–4H, L–4J, 5A
ATIS 127.6	п-4п, ц-4Ј, БА
Mexicali App Con 118.2 Mexicali Tower 118.2 Mexicali Info 123.9 122.3	11 70 1 04 4
General Servando Canales (MMMA)	H-7C, L-21A
Matamoros App Con 118.0 Matamoros Tower 118.0	11.70
Plan De Guadalupe Intl (MMIO)	H-7B
Saltillo App Con 127.4 Saltillo Tower 118.4	
0 1 1 d1 d20000	
Quetzalcoati Inti (MMNL)	H-7B, L-20G
Nuevo Laredo App Con 118.3 Nuevo Laredo Tower 118.3	H–7B, L–20G
Nuevo Laredo App Con 118.3 Nuevo Laredo Tower 118.3  Torreon Intl (MMTC)	H-7B, L-20G
Nuevo Laredo App Con 118.3 Nuevo Laredo Tower 118.3	

In support of the Federal Aviation Administration's Runway Incursion Program, selected towered airport diagrams have been published in the Airport Diagram section of the A/FD. Diagrams will be listed alphabetically by associated city and airport name. Airport diagrams, depicting runway and taxiway configurations, will assist both VFR and IFR pilots in ground taxi operations. The airport diagrams in this publication are the same as those published in the U.S. Terminal Procedures Publications. For additional airport diagram legend information see the U.S. Terminal Procedures Publication.

NOTE: Some text data published under the individual airport in the front portion of the A/FD may be more current than the data published on the Airport Diagrams. The airport diagrams are updated only when significant changes occur.

#### GENERAL INFORMATION

#### PILOT CONTROLLED AIRPORT LIGHTING SYSTEMS

Available pilot controlled lighting (PCL) systems are indicated as follows:

- Approach lighting systems that bear a system identification are symbolized using negative symbology, e.g., ♠, ♠, ♠
   Approach lighting systems that do not bear a system identification are indicated with a negative "♠" beside the name.
- A star (\*) indicates non-standard PCL, consult the individual airport in the front portion of the A/FD, e.g., **0**\* To activate lights use frequency indicated in the communication section of the chart with a **0** or the appropriate

lighting system identification e.g., UNICOM 122.8 **0**, **₫**, **♥** 

KEY MIKE

7 times within 5 seconds

5 times within 5 seconds 3 times within 5 seconds

FUNCTION
Highest intensity available

Medium or lower intensity (Lower REIL or REIL-off) Lowest intensity available (Lower REIL or REIL-off)

#### CHART CURRENCY INFORMATION

FAA procedure amendment number Amdt 11A 99365 Date of latest change Orig 00365

The Chart Date indentifies the Julian date the chart was added to the volume or last revised for any reason. The first two digits indicate the year, the last three digits indicate the day of the year (001 to 365/6) in which the latest addition or change was first published.

The Procedure Amendment Number precedes the Chart Date, and changes any time instrument information (e.g., DH, MDA, approach routing, etc.) changes. Procedure changes also cause the Chart Date to change.

#### **MISCELLANEOUS**

- ★ Indicates a non-continuously operating facility, see the individual airport in the front portion of the A/FD.
- # Indicates control tower temporarily closed UFN.

09071 **IFGFND** 

## INSTRUMENT APPROACH PROCEDURES (CHARTS)

#### AIRPORT DIAGRAM Runways Other Than Stopways, Taxiways, Ďisplaced Hard Hard Surface Parking Areas, Threshold

Closed Runway

Surface

xxx Closed Taxiway Water Runways Under

Construction

Meta Surface

∮ Jet Barrier

ARRESTING GEAR: Specific arresting gear systems; e.g., BAK12, MA-1A etc., shown on airport diagrams, not applicable to Civil Pilots. Military Pilots refer to appropriate DOD publications.

uni-directional bi-directional ARRESTING SYSTEM

#### REFERENCE FEATURES

Buildings Tanks Radar Reflectors. Control Tower #..... Hot Spot

# When Control Tower and Rotating Beacon are co-located, Beacon symbol will be used and further identified as TWR

Runway length depicted is the physical length of the runway (end-to-end, including displaced thresholds if any) but excluding areas designated as stopways.

A D symbol is shown to indicate runway declared distance information available, see appropriate A/FD, Alaska or Pacific Supplement for distance information. Helicopter Alighting Areas (H) [H] [H] [A] [H] Negative Symbols used to identify Copter Procedures

landing point..... Runway Threshold elevation.....THRE 123

Runway TDZ elevation......TDZE 123 --- 0.3% DOWN

(shown when runway slope is greater than or equal to 0.3%)

Runway Slope measured to midpoint on runways 8000 feet or longer.

U.S. Navy Optical Landing System (OLS) "OLS" location is shown because of its height of approximately 7 feet and proximity to edge of runway may create an obstruction for some types of aircraft.

Approach light symbols are shown in the Flight Information Handbook.

Airport diagram scales are variable.

True/magnetic North orientation may vary from diagram to diagram

Coordinate values are shown in 1 or ½ minute increments. They are further broken down into 6 second ticks, within each 1 minute increments.

Positional accuracy within ±600 feet unless otherwise noted on the chart.

All new and revised airport diagrams are shown referenced to the World Geodetic System (WGS) (noted on appropriate diagram), and may not be compatible with local coordinates published in FLIP. (Foreign Only)

Runway Weight Bearing Capacity/or PCN Pavement Classification Number is shown as a codified expression.

Refer to the appropriate Supplement/Directory for applicable codes e.g., RWY 14-32 S75, T185, ST175, TT325

PCN 80 F/D/X/U

Rwy 2 ldg 8000' **FIELD** Runway Displaced Threshold **ELEV** Slope Runway 174 **EMAS** Identification **BAK-12** 1200 X 200 0.7% UP 1000 X 200 9000 X 200 023.2°() Arrestina System Operations ELÉV Runway End (in feet) 164 Runway Dimensions Runway Heading Elevation (in feet) Stopway Dimensions (Magnetic) (in feet) SCOPE

Airport diagrams are specifically designed to assist in the movement of ground traffic at locations with complex runway/taxiway configurations and provide information for updating Computer Based Navigation Systems (I.E., INS, GPS) aboard aircraft. Airport diagrams are not intended to be used for approach and landing or departure operations. For revisions to Airport Diagrams: Consult FAA Order 7910.4.

# **LEGEND**

# AIRPORT DIAGRAMS HOT SPOTS

An "Airport surface hot spot" is a location on an aerodrome movement area with a history or potential risk of collision or runway incursion, and where heightened attention by pilots/drivers is necessary.

A "hot spot" is a runway safety related problem area on a airport that presents increased risk during surface operations. Typically it is a complex or confusing taxiway/taxiway or taxiway/runway intersection. The area of increased risk has either a history of or potential for runway incursions or surface incidents, due to a variety of causes, such as but not limited to: airport layout, traffic flow, airport marking, signage and lighting, situational awareness, and training. Hot spots are depicted on airport diagrams as open circles designated as "HOT¹", "HOT²", etc. and tabulated in the list below with a brief description of each hot spot. Hot spots will remain charted on airport diagrams until such time the increased risk has been reduced or eliminated.

DESCRIPTION

HOT SPOT

CITY/AIRPORT

, 	ARIZONA	
MESA FALCON FLD (FFZ)	HOT <sup>1</sup>	Acft approaching Twy D from the ramp and destined for Rwy 4R or Rwy 22L sometimes miss the turn into Twy D.
TUCSON RYAN FLD (RYN)	HOT <sup>1</sup>	Air traffic often taxies acft via Twy B and onto Rwy 33 for departure on Rwy 6R. Use caution not to enter Rwy 6R without ATC authorization.
TUCSON TUCSON INTL (TUS)	HOT <sup>1</sup> HOT <sup>2</sup>	Complex intersecion.  Pilots instructed to hold short of Rwy 11L–29R or Rwy 11R–29L sometimes cross the approach area of these rwys without authorization.
	HOT <sup>3</sup> CALIFORNIA	Rwy 29R sometimes mistaken for Rwy 29L.
HAYWARD		
HAYWARD EXECUTIVE (HWD)	HOT <sup>1</sup>	Acft approaching Twy A from the ramp sometimes fail to turn onto Twy A, proceeding onto Twy E and ultimately Rwy 10L–28R.
	HOT <sup>2</sup> HOT <sup>3</sup>	Area not visible from ATCT.  Area not visible from ATCT.
	HOT	Area not visible from ATCT.
LONG BEACH LONG BEACH DAUGHERTY FLD (LGB)	HOT <sup>1</sup>	Acft exiting Rwy 30 at Twy A turn left on Twy D, anticipate reaching their destination, and fail to hold short of Rwy 7L–25R.
	HOT <sup>2</sup>	Acft northbound on Twy B and instructed to hold short of Rwy 12–30 at Twy K sometimes miss the turn onto Twy K and proceed straight ahead onto
	HOT <sup>3</sup>	Rwy 12–30 and Rwy 7L–25R.  Acft southbound on Twy B anticipate reaching their destination parking ramp and fail to hold short of Rwy 7R–25L.
	HOT <sup>4</sup>	Acft eastbound on Twy J instructed to taxi to Rwy 25L at Twy D sometimes miss the turn onto Twy D and proceed onto Rwy 12–30 without authorization.
	HOT <sup>5</sup>	Acft taxiing to Rwy 16R from the southwest ramp sometimes miss the left turn onto Twy B, continue eastbound onto Twy F, and enter Rwy 16R–34L.
	HOT <sup>6</sup>	After completing a run-up on inactive Rwy 34R, aircraft sometimes fail to hold short of Rwy 7R-25L.
	HOT <sup>7</sup>	Acft landing Rwy 30, be aware that this rwy crosses every other rwy at the airport. When exiting, pilots should ensure they are following a yellow, "lead-off" line onto a rwy.
MERDED	1	•
CASTLE (MER)	HOT <sup>1</sup>	Complex area. Verify correct taxi route. Areas south of Twy A and Twy G are private ramp.  Traffic congestion due to large volume of aircraft
		proceeding to and from Rwy 31.

# **AIRPORT DIAGRAMS**

OAKLAND		
METROPOLITAN OAKLAND INTL	HOT <sup>1</sup>	Twy A and Twy B both cross Rwy 27R. Pilots sometimes mistake Twy A for Twy B, and vice versa.
(OAK)	HOT <sup>2</sup>	Verify correct taxi route.  Acft departing the ramp sometimes miss their turn onto Twy C or Twy D, mistakenly proceeding onto
	HOT <sup>3</sup>	Twy H or Twy G and ultimately Rwy 9L-27R. Complex intersection. Pilots sometimes taxi onto Rwy 9L or Rwy 33 by mistake.
PALM SPRINGS		m, or a m, or a, mount
PALM SPRINGS	HOT <sup>1</sup>	Pilots sometimes mistake Twy C for Rwy 13R-31L
INTL (PSP)	HOT <sup>2</sup>	or Rwy 13L–31R. Pilots instructed to taxi to Rwy 13R via Twy B and
	HOT <sup>3</sup>	Twy C sometimes miss the turn onto Twy C and proceed onto Rwy 31R without authorization. Pilots approaching Rwy 31R on Twy B sometimes fail to hold short of Rwy 31R.
SALINAS		Tall to hold short of kwy 31k.
SALINAS MUNI (SNS)	HOT <sup>1</sup>	Acft instructed to taxi from the ramp to Rwy 31 sometimes miss the turn onto Twy A and continue along Twy E, subsequently entering Rwy 31 without ATC authorization.
	HOT <sup>2</sup>	Acft instructed to taxi from the ramp to Rwy 26 sometimes miss the burn onto Twy C and continue along Twy A, subsequently entering Rwy 26 at Twy A without ATC authorization.
SAN FRANCISCO		
SAN FRANCISCO	HOT <sup>1</sup>	Pilots instructed to follow Twy B south sometimes
INTL (SFO)	HOT <sup>2</sup>	continue onto Twy J or Twy F by mistake. Pilots taxiing east on Twy C and instructed on turn
		right onto Twy E sometimes miss the turn onto Twy E and continue across Rwy 1L-19R by mistake.
SAN JOSE		
NORMAN Y. MINETA SAN JOSE INTL (SJC)	HOT <sup>1</sup>	Pilots assigned Rwy 29 for landing sometimes land Rwy 30L by mistake. Pilots proceeding into, or
0/11/300E 11/1E (030)		exiting, the Rwy 29 run-up area sometimes enter Rwy 29 without ATC authorization.
SANTA ANA		
JOHN WAYNE AIRPORT/ORANGE	HOT <sup>1</sup>	ATC often instructs pilots to "Taxi up to and hold short" of Rwy 19L and Rwy 19R. As with normal
CO (SNA)		hold short instruction, one must always stop short
	HOT <sup>2</sup>	of the Runway Holding Position Markings. Pilots exiting Rwy 19R or Rwy 19L onto Twy H: short
		distance between rwys. Expect to hold short of the parallel rwy. Manage your taxi speed. Do not cross
		the Runway Holding Position Markings for the
	HOT <sup>3</sup>	parallel rwy without ATC authorization. Pilots taxiing via Twy A, Twy H, and Twy C
		sometimes miss the turn from Twy H to Twy C.
SANTA BARBARA SANTA BARBARA MUNI (SBA)	HOT <sup>1</sup>	Pilots are sometimes confused by the angle at
	HOT <sup>2</sup>	which Twy C intersects Rwy 7–25.  Very wide pavement area. Do not cross Rwy 15L or
	HOT <sup>3</sup>	Rwy 15R without authorization. ATC often utilizes Rwy 15L–33R and Rwy 15R–33L
		to taxi arriving aircraft off of Rwy 7–25.
	HOT⁴	Pilots instructed to taxi to Rwy 35 sometimes miss the turn onto Twy J, not realizing that the approach end of Rwy 25 begins at Twy J.
	COLO	RADO
DENVER CENTENNIAL (APA)	HOT <sup>1</sup>	Intersection Twy A-1. Hold line across run-up area.
OLIVI LIVINIAL (APA)	1101	intersection rwy A-1. Hold lifte across full-up afea.

CENTENNIAL (APA) HOT $^1$  Intersection Twy A-1. Hold line across run—up area. HOT $^2$  Twy A-4 and B-4 cross Rwy 17L at touchdown zone. Twy A, Twy A-8, Twy A-9 and Twy C-1 congested intersections.

Twy C-1 and Twy D-1 close proximity to Rwy 10.

AIRPORT DIAGRAMS DENVER **ROCKY MOUNTAIN** HOT1 METROPOLITAN (BJC) Frequent helicopter operations on north ends of Twy B and Rwy 02-20. Use caution in this area. FAGLE HOT1 EAGLE COUNTY RGNL (EGE) High density parking area on ramp east of Twy C-2. Air carrier aircraft should not leave or enter taxiway A east of Twy C-2. NFVADA LAS VEGAS HOT1 MC CARRAN INTL Exiting the ramp, use caution at Twy S not to cross (LAS) the rwy holding position markings for Rwy 19L. Twy S intersects with Twv D. Twv Z. and Twv G. which require a turn to the north or south.  $HOT^2$ Exiting Rwv 1R-19L use caution not to enter Twv U. and avoid entering Rwy 1L-19R without authorization  $HOT^3$ Exiting Rwy 1R-19L use caution not to enter Twy Y, and avoid entering Rwy 1L-19R without authorization.  $HOT^4$ Rwy holding position markings for Rwy 7L and Rwy 1L are co-located, and located north of Rwy 7L. Verify rwy heading and alignment with proper rwy prior to departure. HOT<sup>5</sup> Twy E is often misidentified as a rwy. Verify rwy markings prior to departure. LAS VEGAS NORTH LAS VEGAS  $HOT^{1}$ ATC often requires Rwy 12R departures to hold (VGT) short of Rwy 7. Common mistake is to cross Rwy 7 without ATC authorization.  $HOT^2$ Pilots sometimes enter or cross Rwy 12R without authorization HOT<sup>3</sup> Pilots taxiing east on Twy A and destined for Rwy 30L sometimes miss the turn onto Twy B, proceeding onto Rwy 12R without ATC authorization. HOT<sup>4</sup> Pilots taxiing east on Twy A sometimes fail to hold short of Rwy 12L, or neglect to turn onto Rwy 12L for departure, instead departing on Twy A.

RENO

RENO/TAHOO INTL

(RNO)

 $HOT^{1}$ 

HOT2

HOT3

HOT1

 $HOT^2$ 

SALT LAKE CITY

SALT LAKE CITY INTL (SLC)

ΙΙΤΔΗ

Caution do not cross hold line for Rwy 35 during taxi SE on Rwy 14-32. Hold line is on north side of Rwy 32 numbers.

left at Twy D by mistake.

Possible confusion between ramp, twy and rwy due to large paved area. Do not cross rwy hold lines without ATC clearance. ATC clearance is needed to enter the movement area, which is immediately

Pilots departing the southwest ramp and instructed

to hold short of Rwy 7-25 sometimes fail to

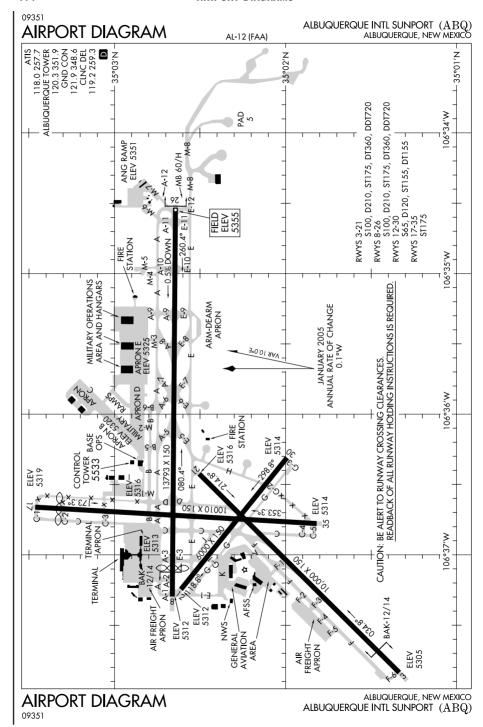
Pilots northbound on Twy C sometimes proceed straight ahead into the ramp by mistake.

Full length departures for Rwv 16L sometimes turn

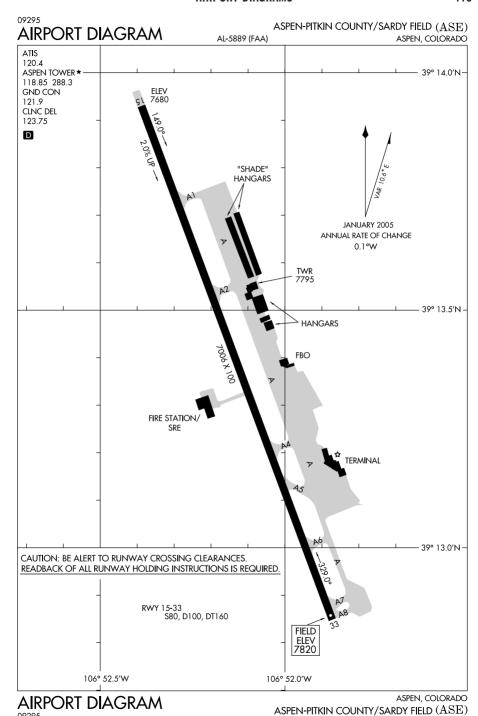
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west of vehicle drive lanes and marked by movement/nonmovement boundary line.

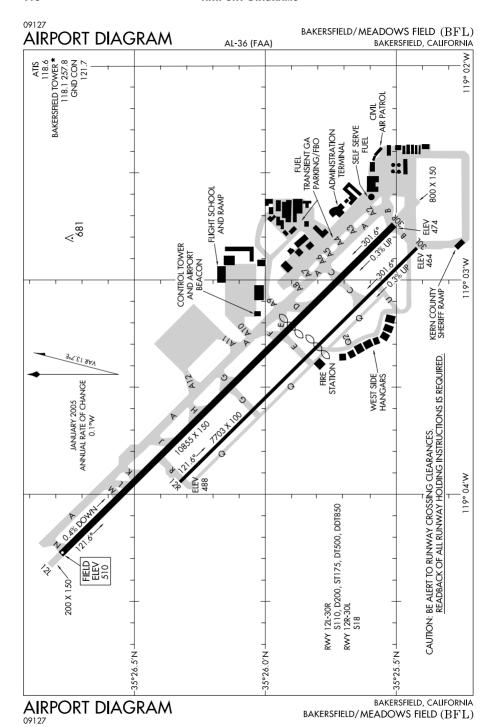
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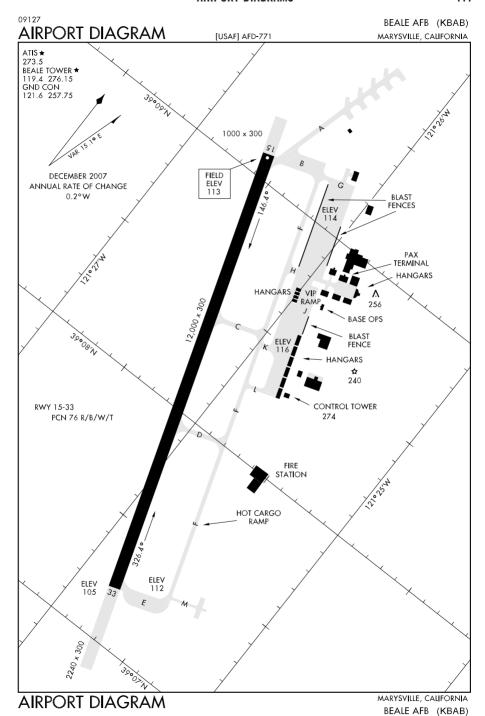


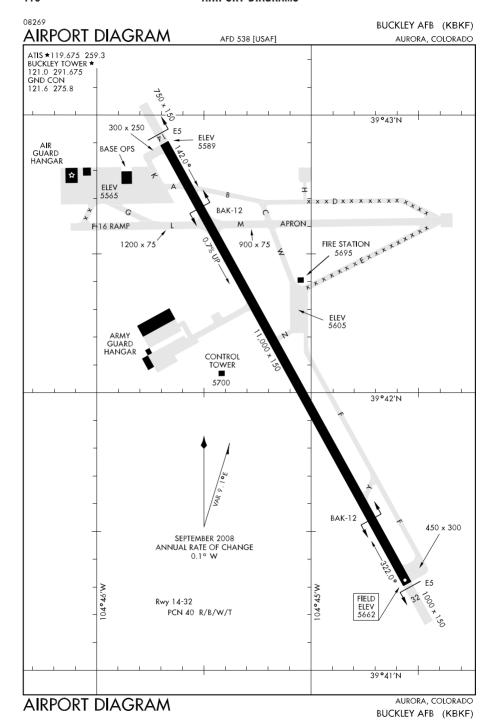
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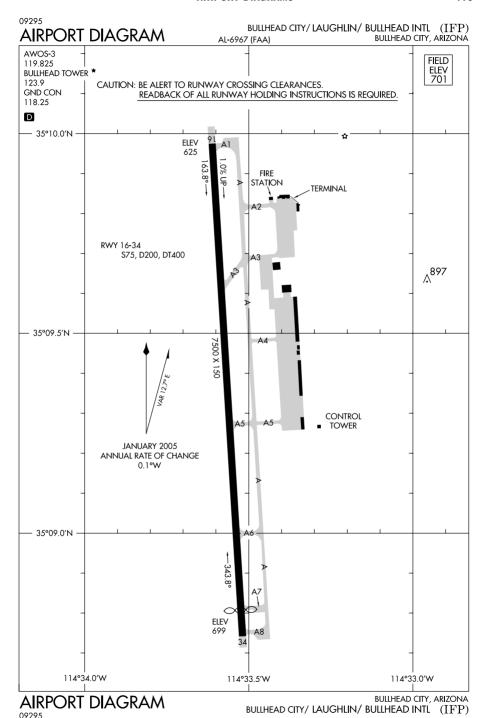
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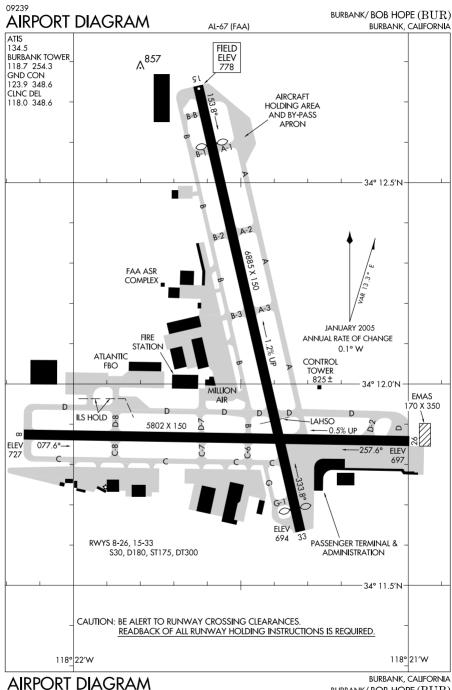




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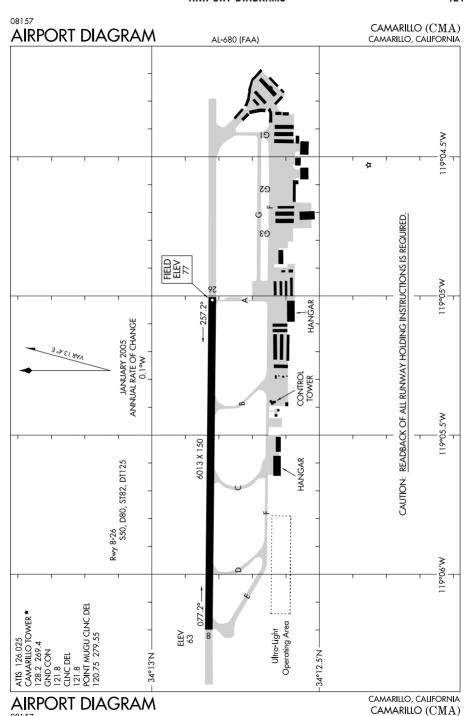


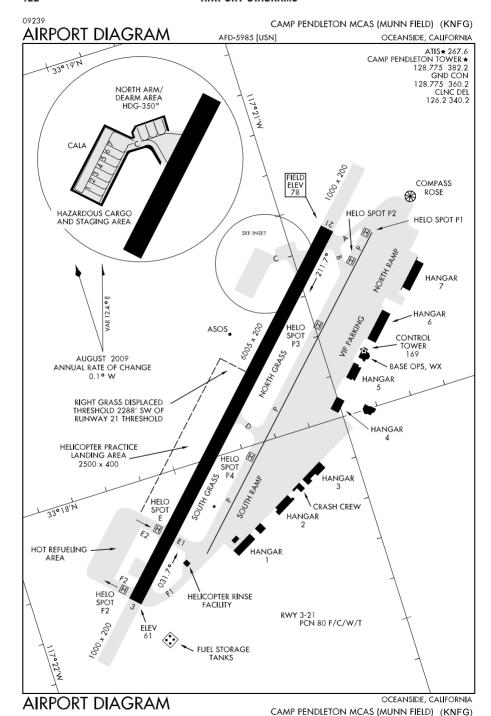
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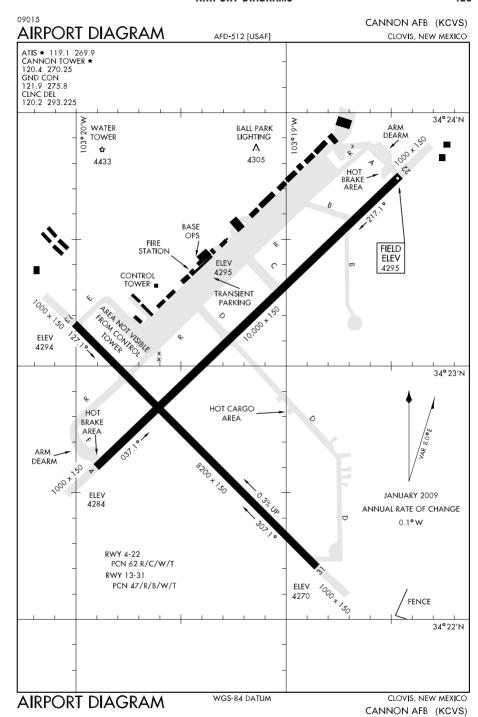


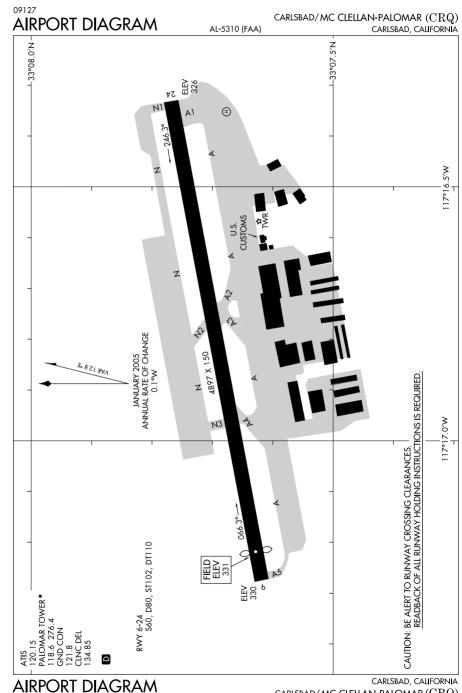
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BURBANK/BOB HOPE (BUR)

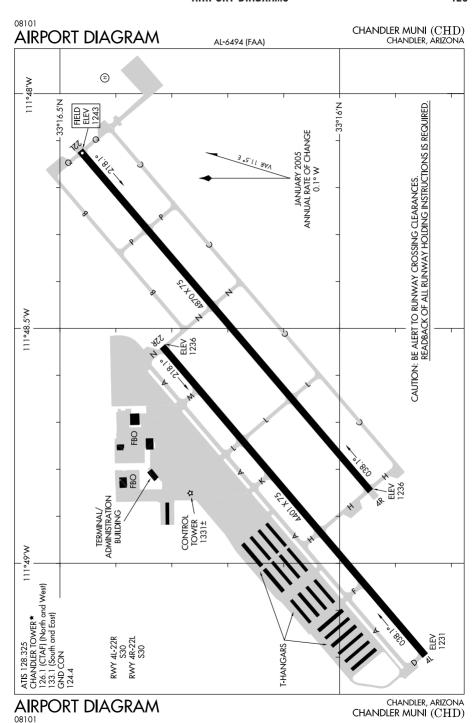


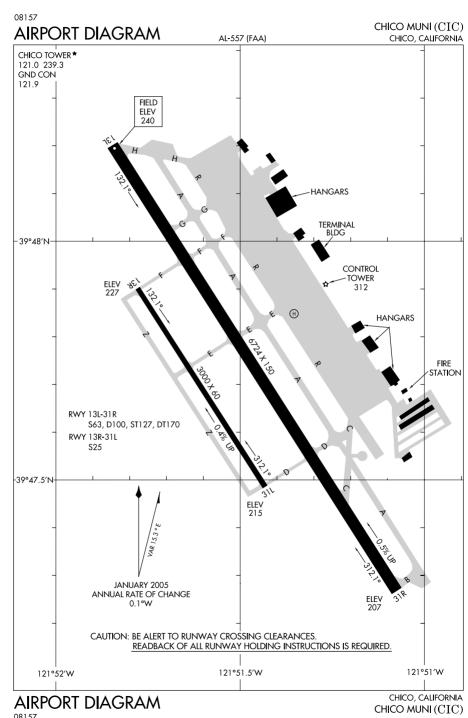




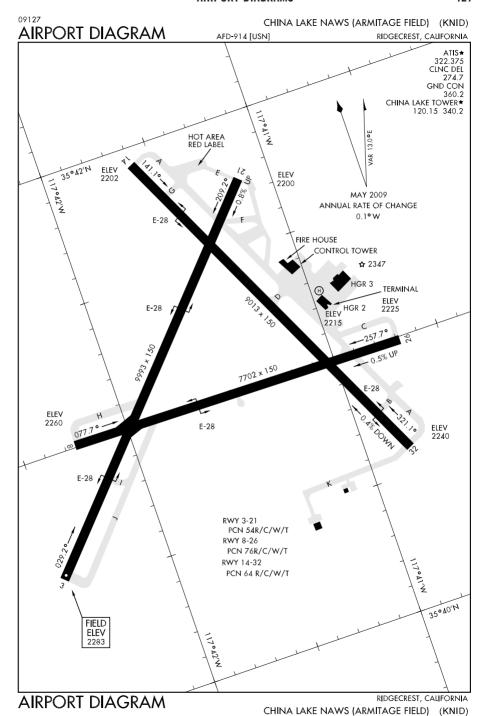


CARLSBAD/ MC CLELLAN-PALOMAR (CRQ)

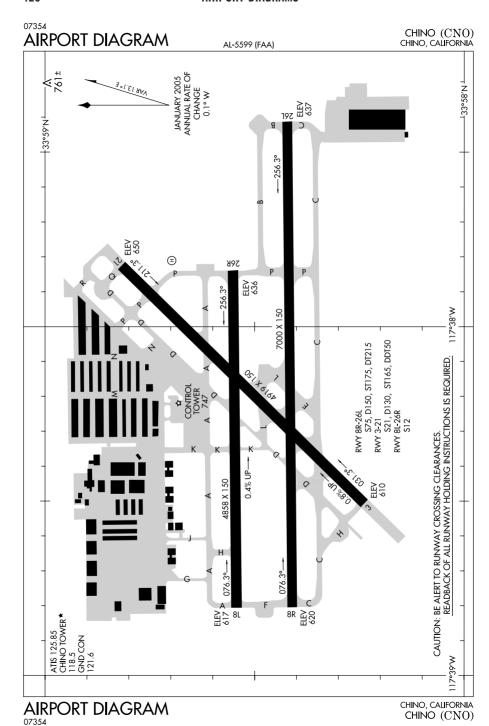


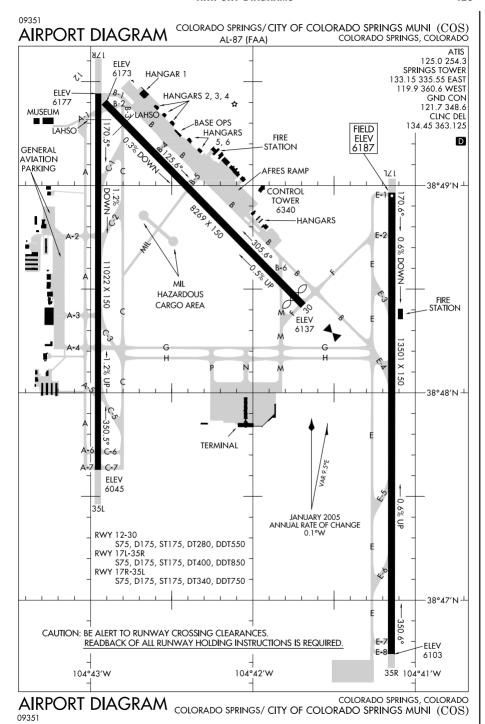


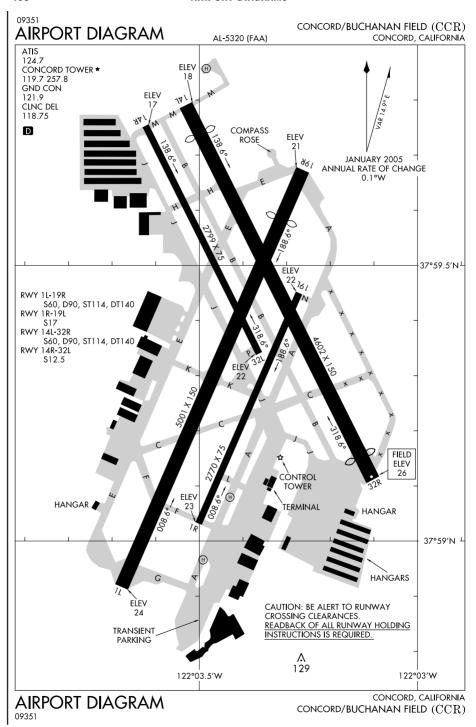
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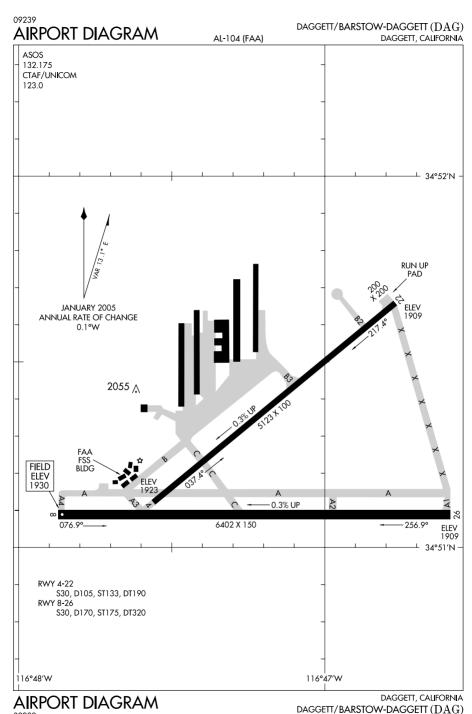
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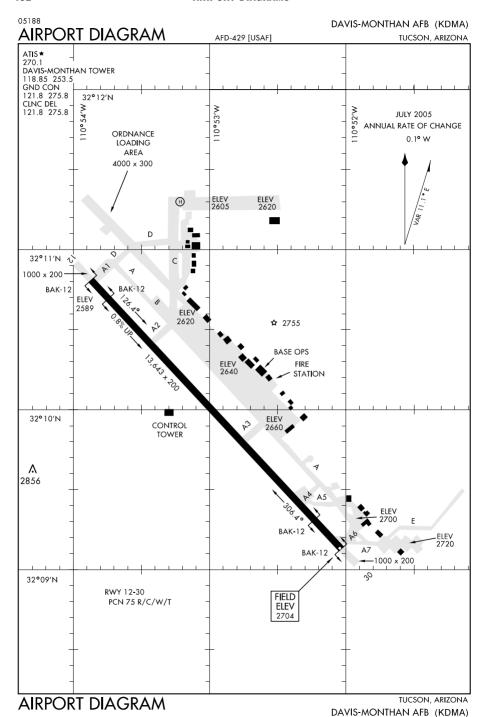




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DENVER, COLORADO

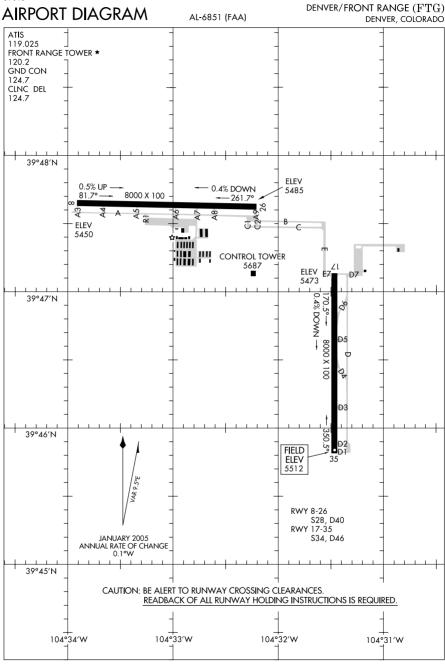
DENVER/CENTENNIAL (APA)

09239 DENVER/CENTENNIAL (APA) AIRPORT DIAGRAM AL-5715 (FAA) DENVER, COLORADO ATIS ILS HOLD 104°51′W 104°50′W HOT 1 120.3 CENTENNIAL TOWER FSS 118.9 ELEV 721 GND CON 5793 121.8 39°35'N-CLNC DEL 168 128.6 GENERAL AVIATION A-2 ALPHA RWY 10-28 **PARKING RAMP** S12.5 RWY 17L-35R A-3 S56, D75, ST95  $HOT^2$ RWY 17R-35L FIFV GENERAL AVIATION 5804 S30 **TERMINALS** CUSTOMS B-4 GENERAL AVIATION 68 PARKING .0% **TWR** GENERAL 5990 AVIATION DELTA RAMP HOT<sup>3</sup> TERMINAL **ADMINISTRATION** BUILDING 0.9% GENERAL A-8 RUNUF AVIATION Ę AREA PARKING HOTEL RAMP **HANGARS** HOT 4 ÈLEV 5824 10002 7000 **GENERAL** × AVIATION B-12 100 **ELEV** TERMINAL A-12 5794 39°34′N -MAINTENANCE .88 DOWN 348 B-16 **ELEV** HOLD 5869 35L JANUARY 2005 ANNUAL RATE OF CHANGE 0.1°W 348. **FIELD ELEV** 35R 5885 CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES. READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

SW, 17 DEC 2009 to 11 FEB 2010

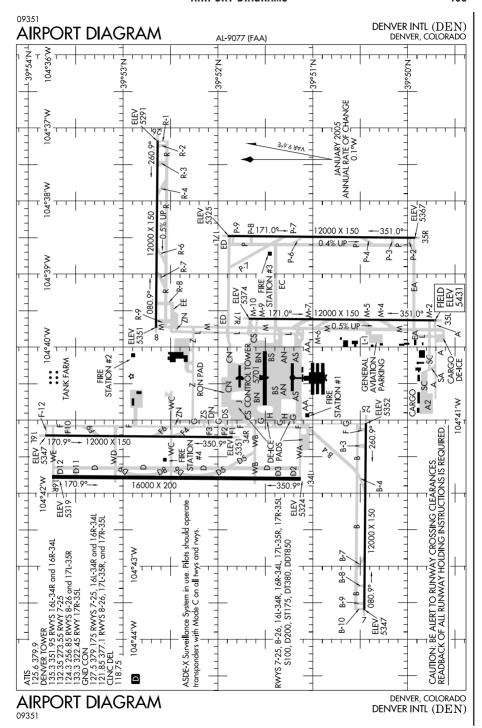
AIRPORT DIAGRAM

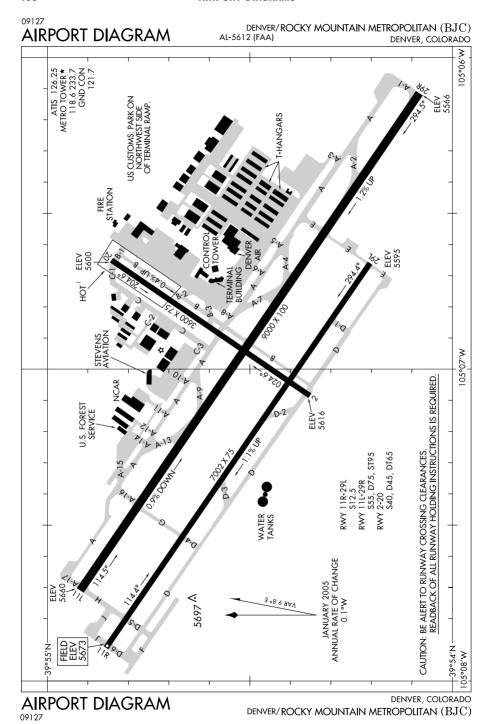




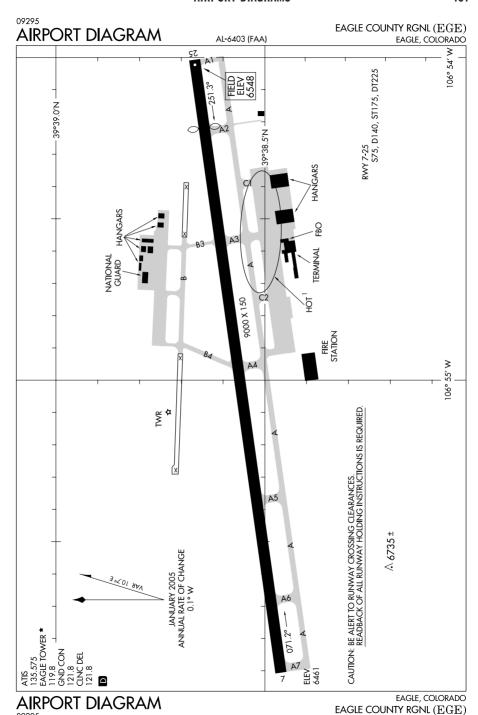
AIRPORT DIAGRAM

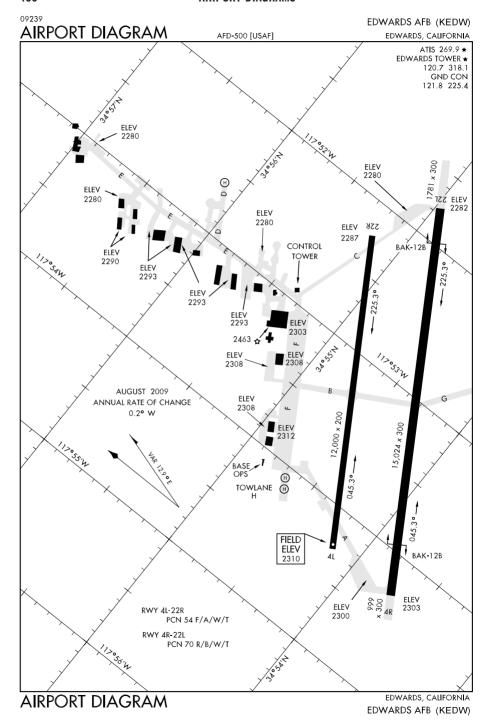
DENVER/FRONT RANGE (FTG)
DENVER, COLORADO



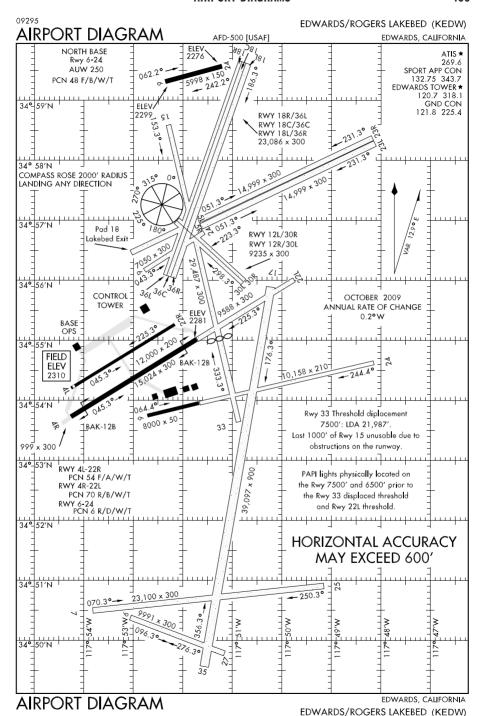


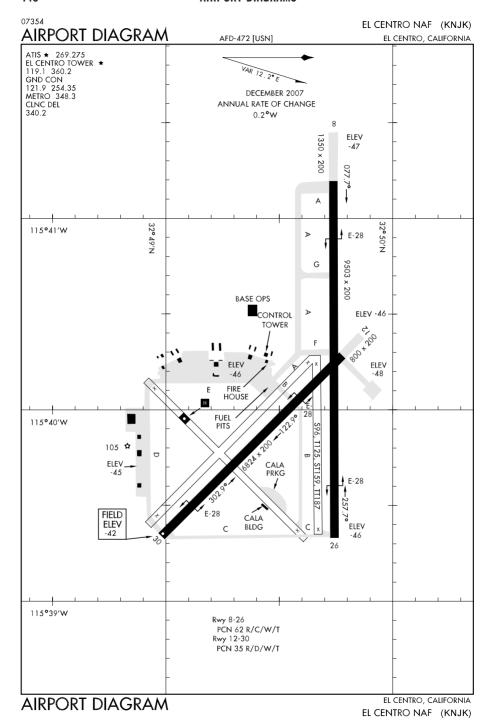
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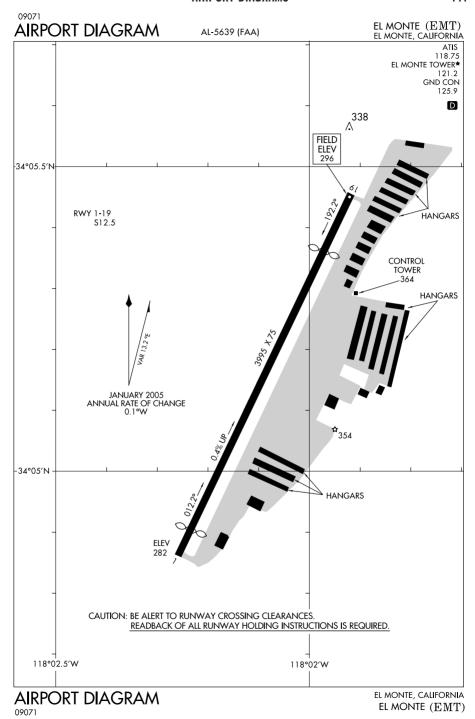




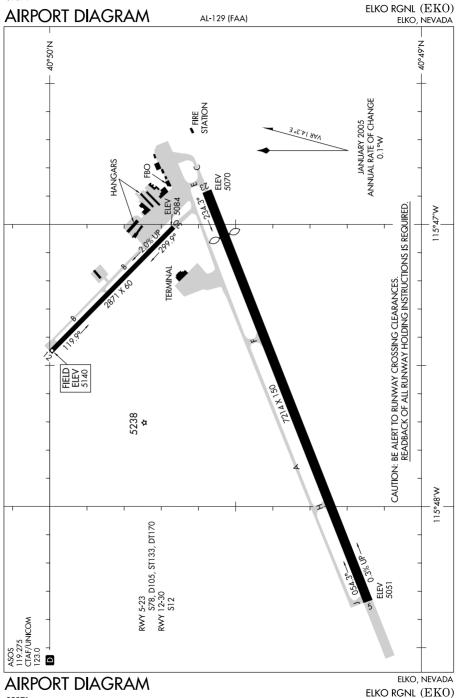
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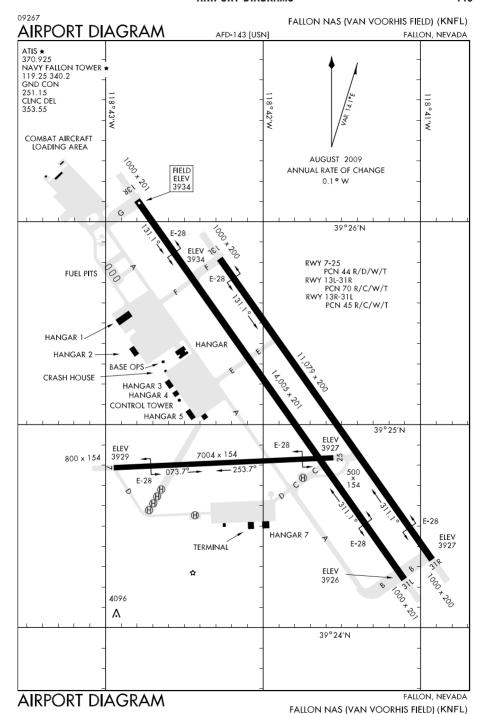




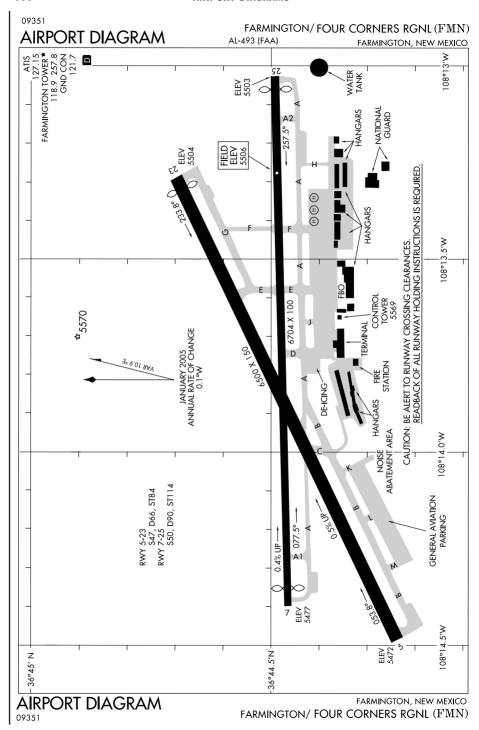




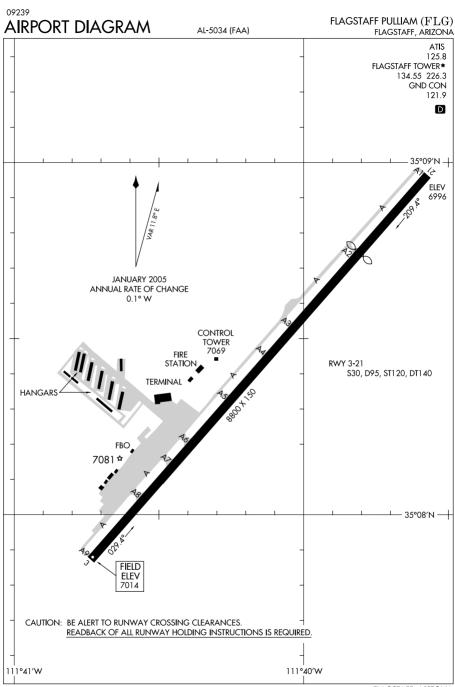




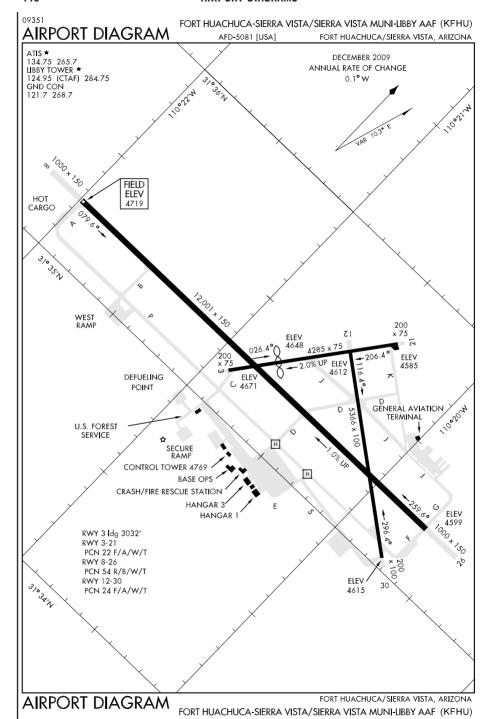
SW, 17 DEC 2009 to 11 FEB 2010



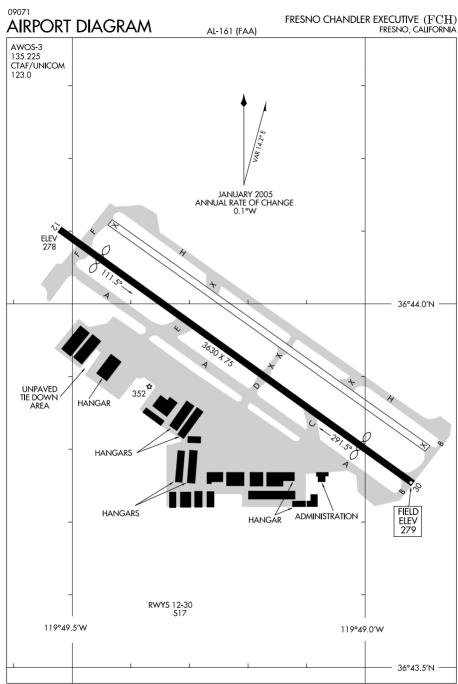
SW, 17 DEC 2009 to 11 FEB 2010



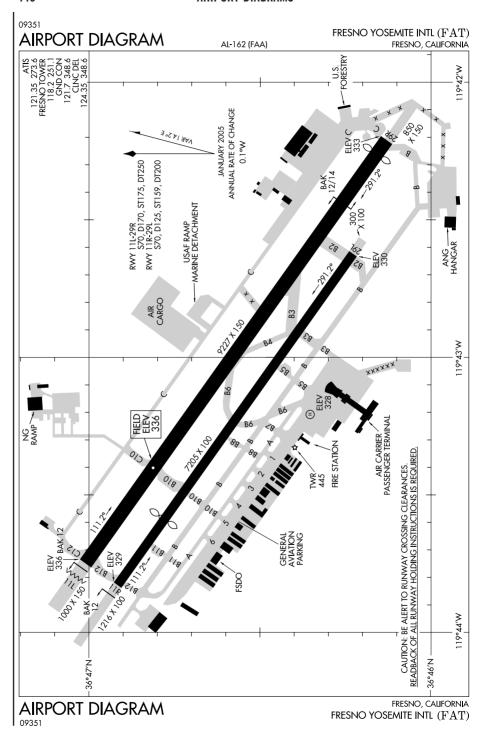
FLAGSTAFF, ARIZONA FLAGSTAFF PULLIAM (FLG)



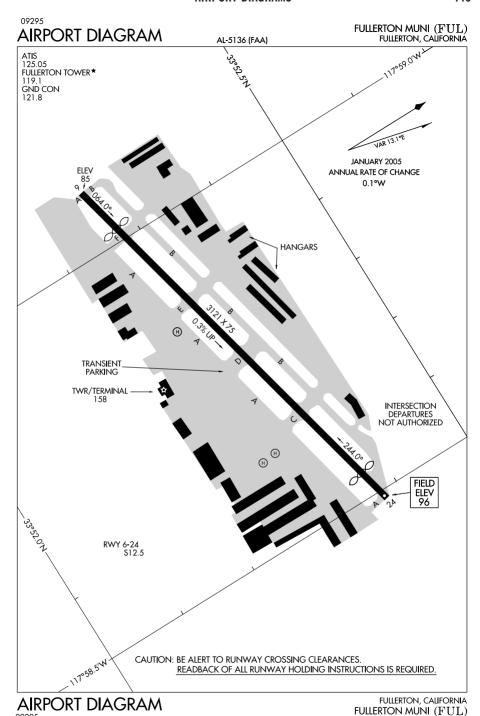
SW, 17 DEC 2009 to 11 FEB 2010

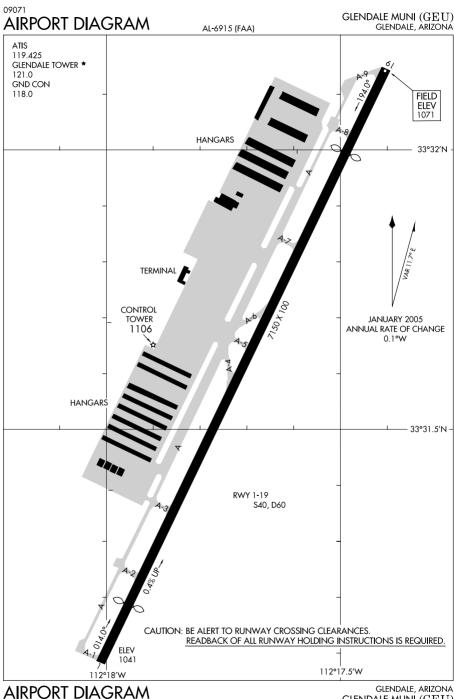


FRESNO, CALIFORNIA FRESNO CHANDLER EXECUTIVE (FCH)

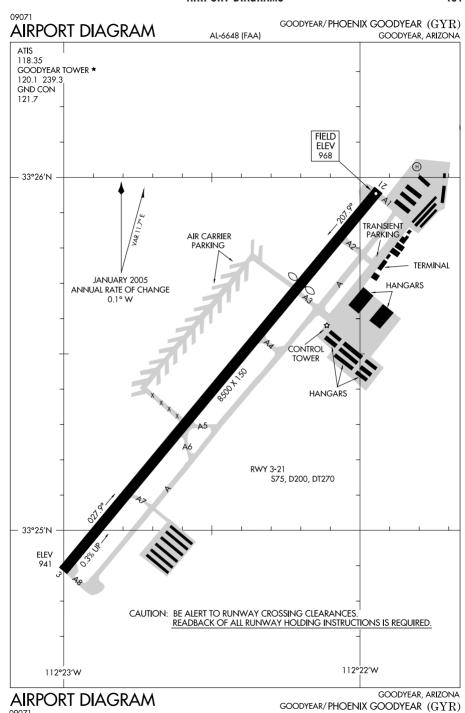


SW, 17 DEC 2009 to 11 FEB 2010

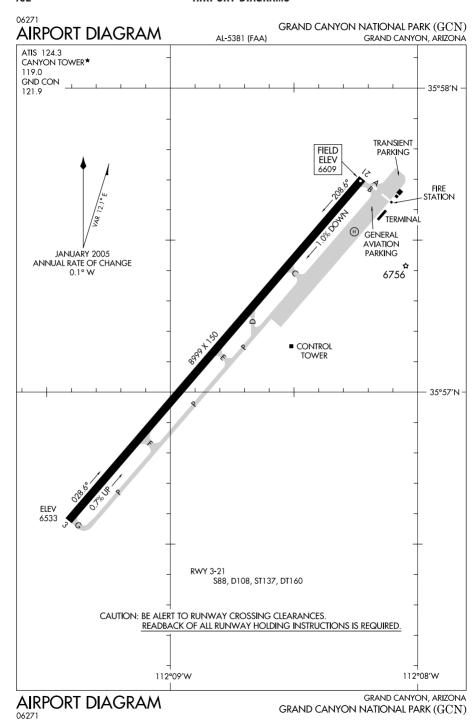




GLENDALE, ARIZONA GLENDALE MUNI (GEU)

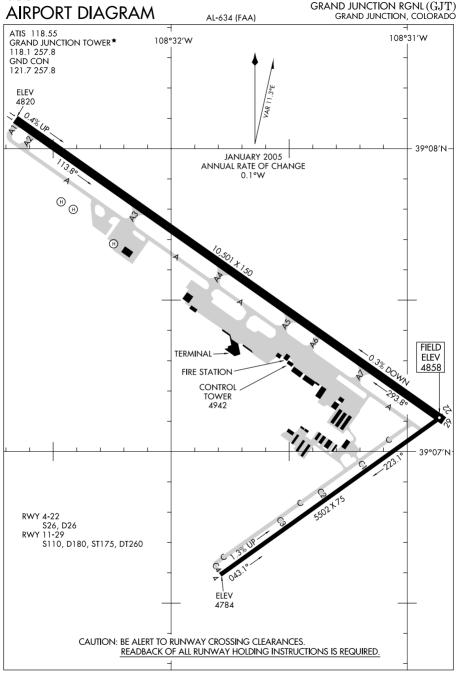


SW, 17 DEC 2009 to 11 FEB 2010



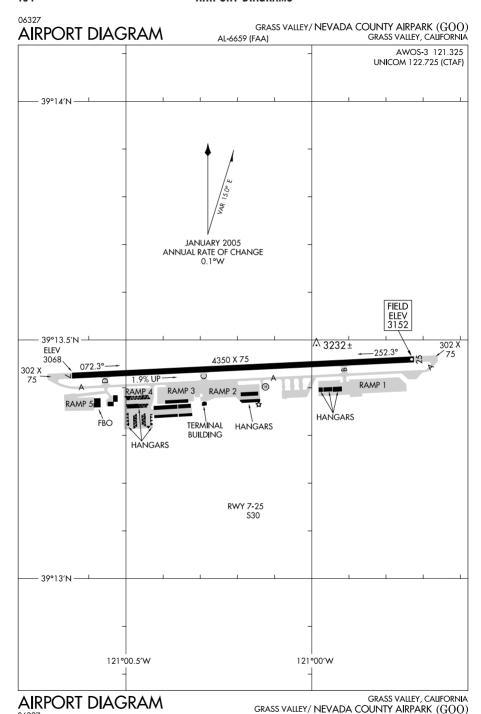
SW, 17 DEC 2009 to 11 FEB 2010

07242

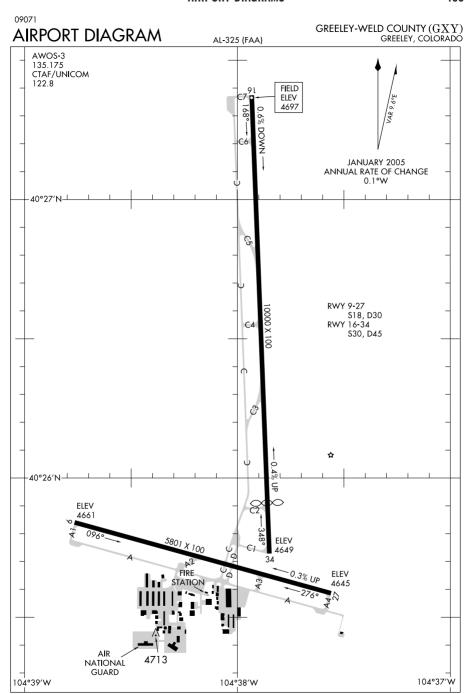


**AIRPORT DIAGRAM** 

Grand Junction, colorado Grand Junction RGNL  $\left(GJT\right)$ 

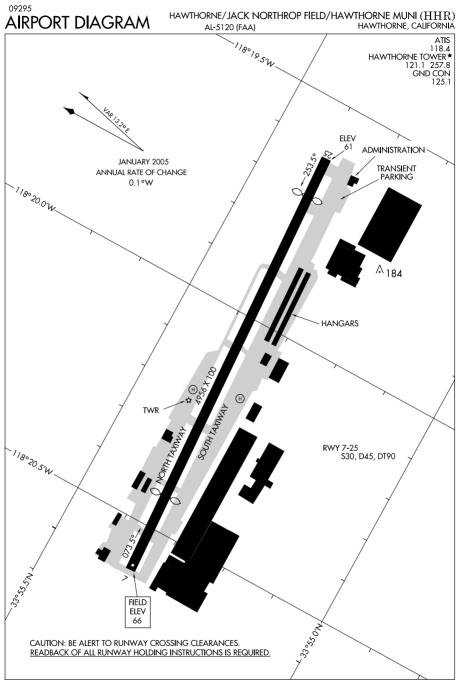


## SW, 17 DEC 2009 to 11 FEB 2010

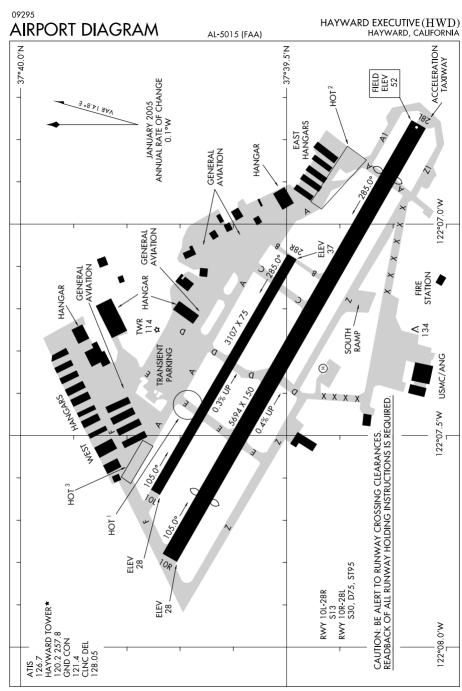


GREELEY, COLORADO GREELEY-WELD COUNTY (GXY)

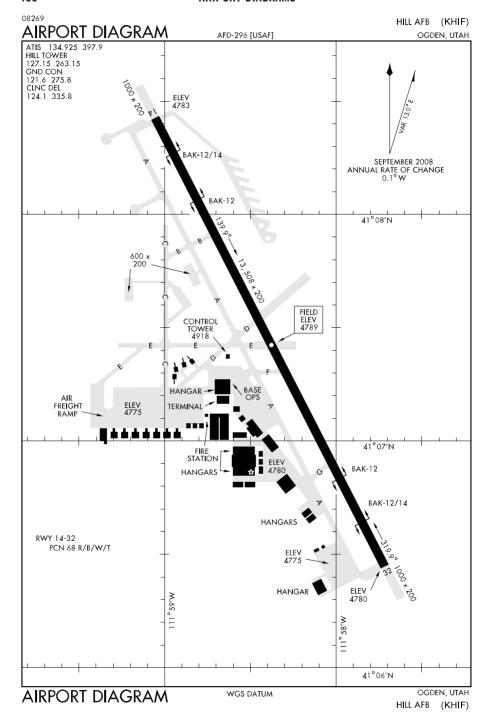
09071

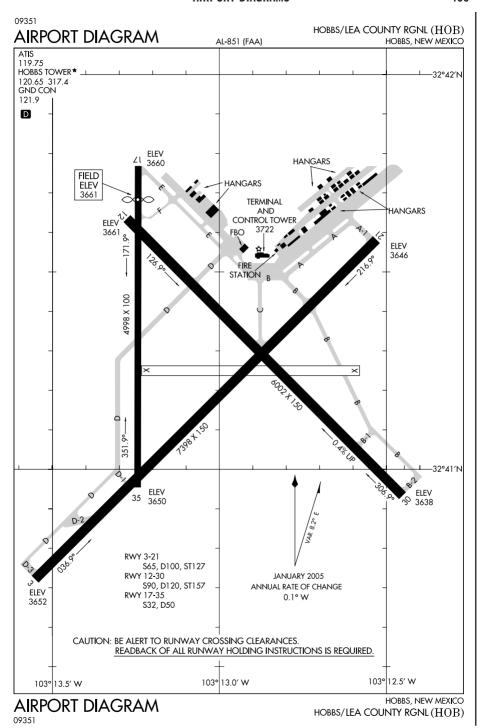


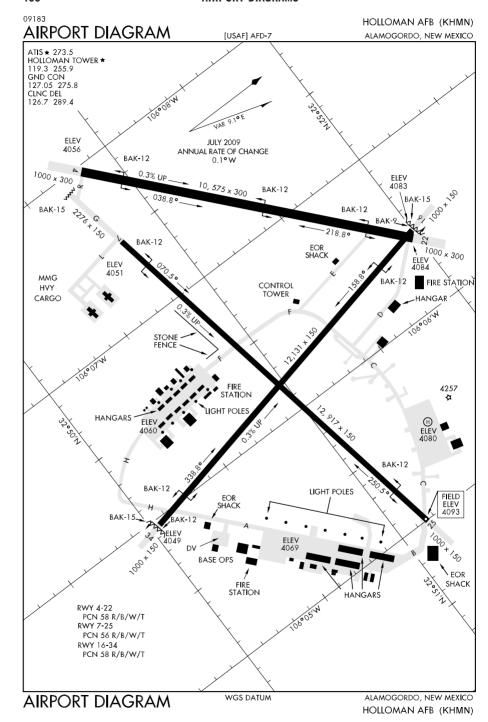
 $\label{eq:hawthorne} \mbox{Hawthorne, california} \\ \mbox{Hawthorne/Jack Northrop field/Hawthorne muni } (HHR)$ 



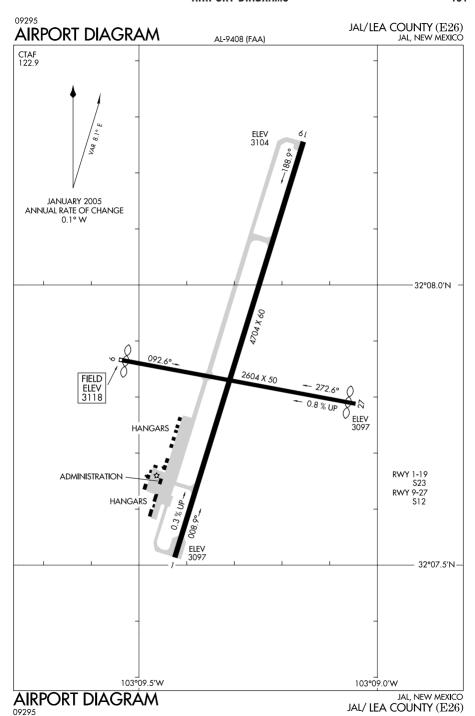
 $\begin{array}{c} \text{HAYWARD, CALIFORNIA} \\ \text{HAYWARD EXECUTIVE}(HWD) \end{array}$ 

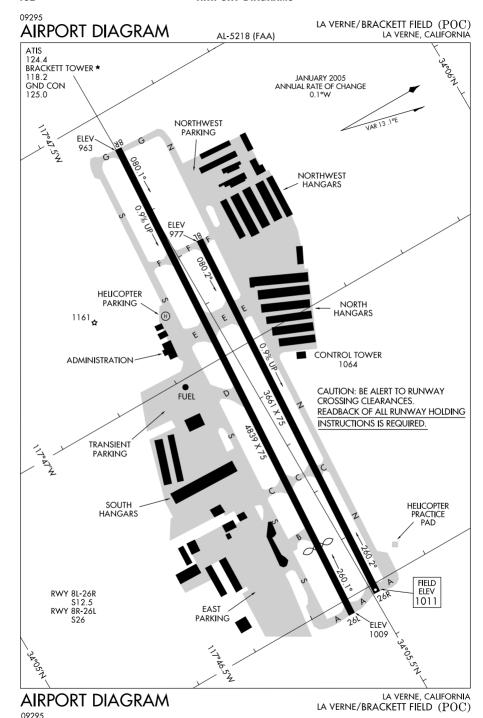


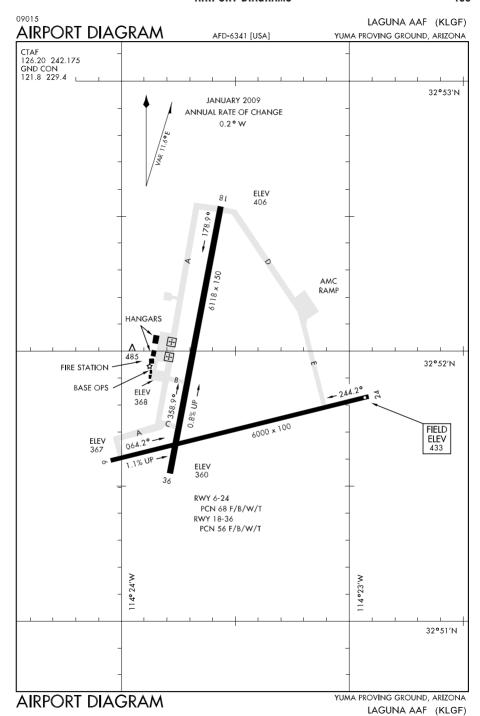


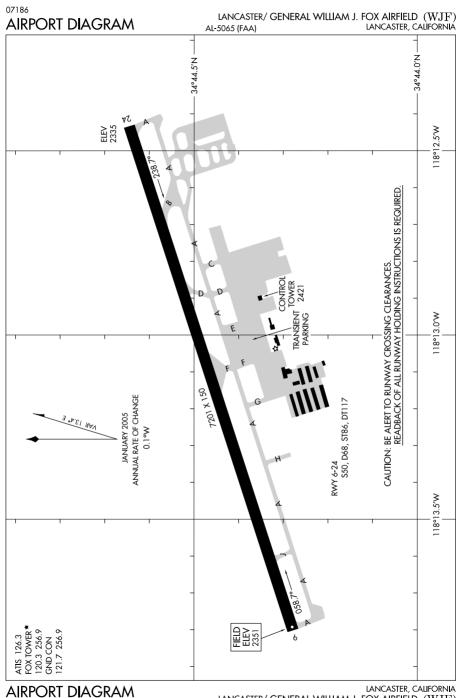


SW, 17 DEC 2009 to 11 FEB 2010

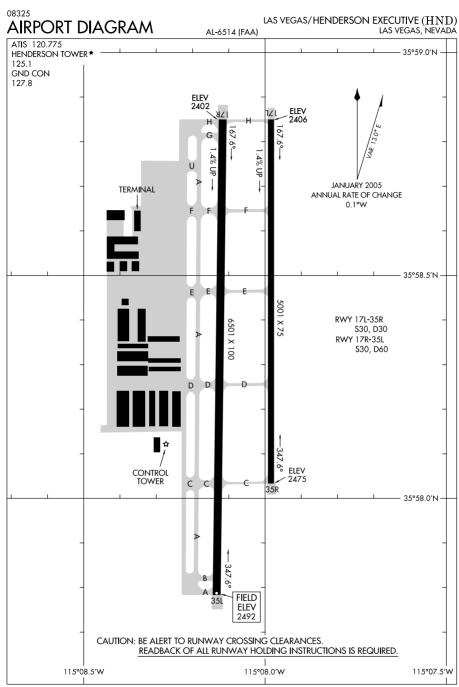




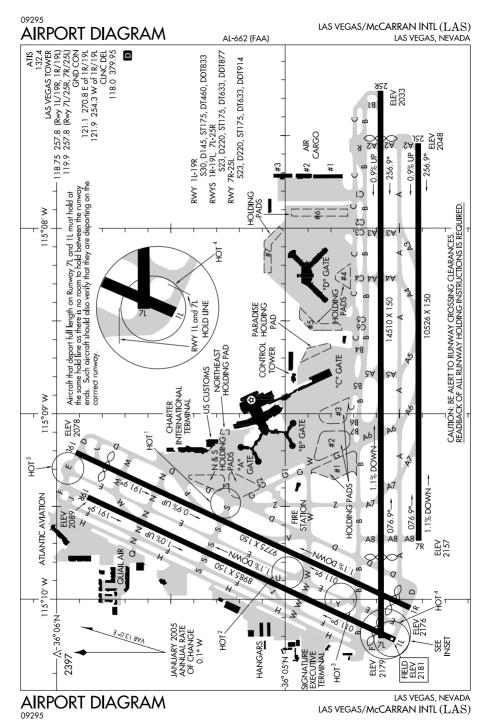


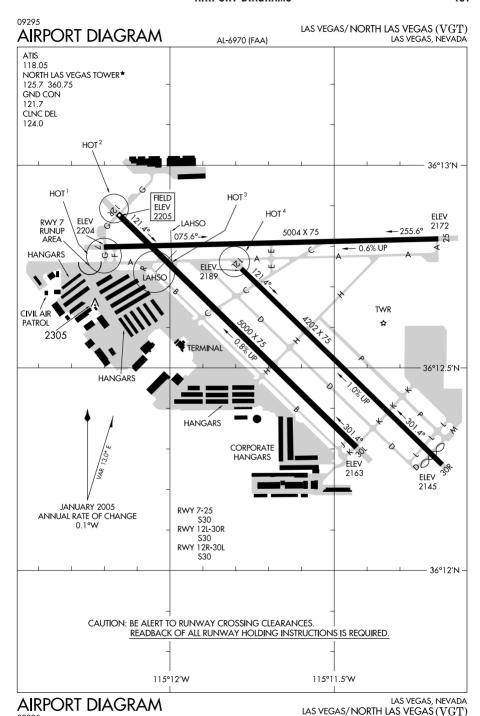


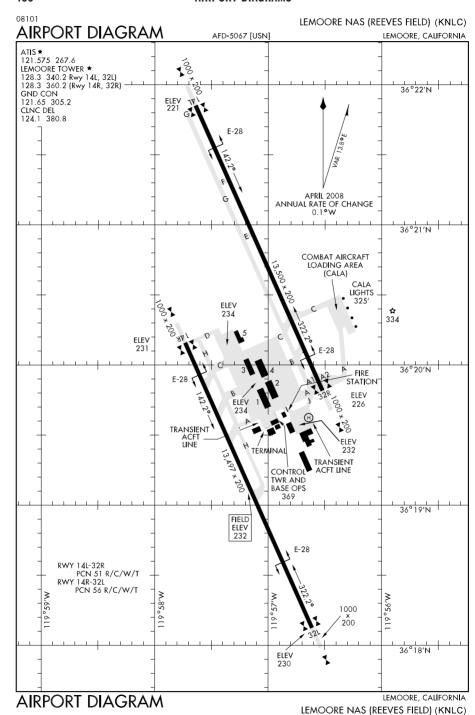
LANCASTER, CALIFORNIA LANCASTER, GENERAL WILLIAM J. FOX AIRFIELD  $\left(WJF\right)$ 07186



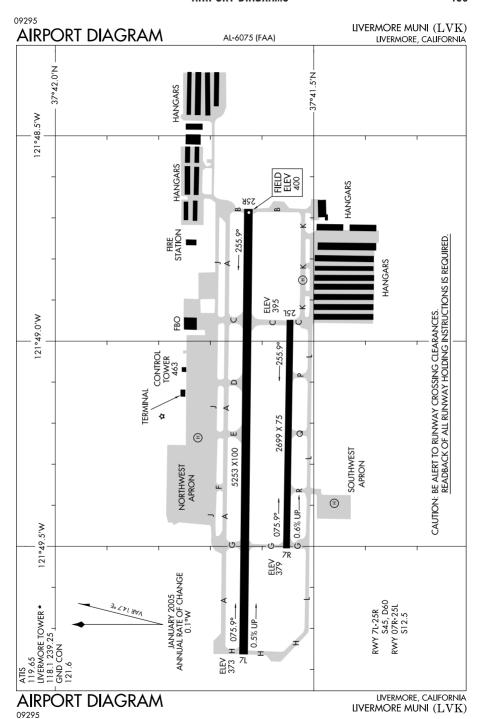
LAS VEGAS, NEVADA LAS VEGAS/HENDERSON EXECUTIVE  $\left(HND\right)$ 

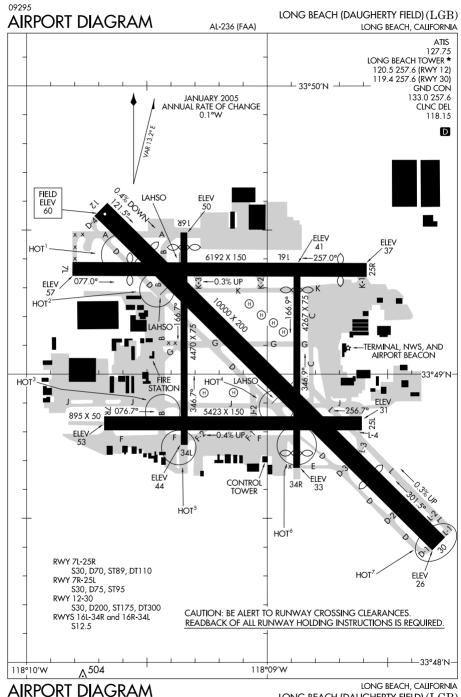






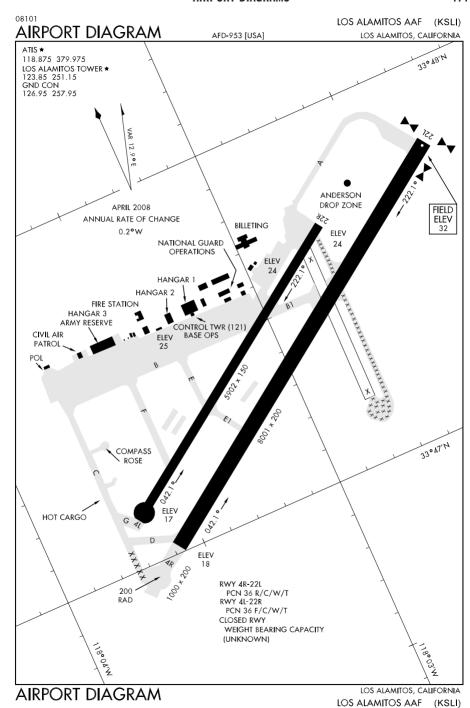
## SW, 17 DEC 2009 to 11 FEB 2010

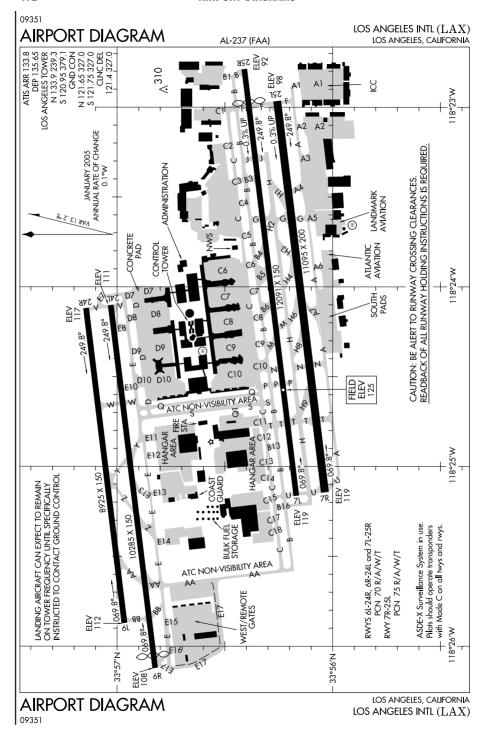




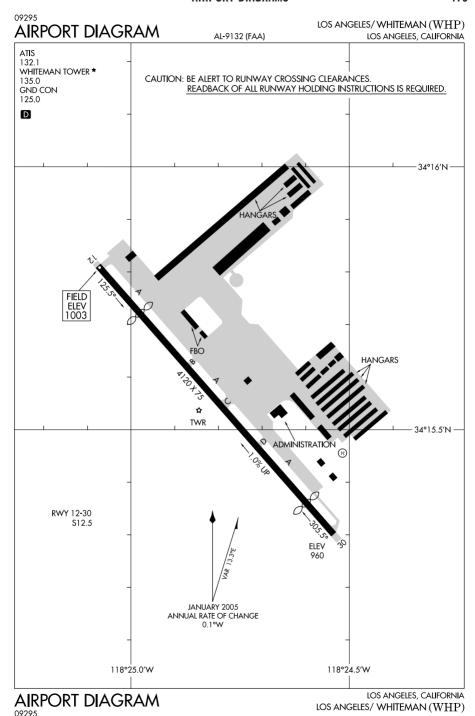
09295

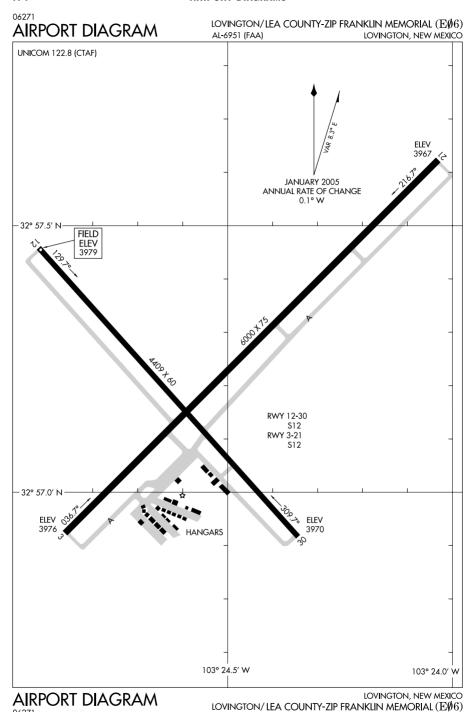
LONG BEACH (DAUGHERTY FIELD) (LGB)

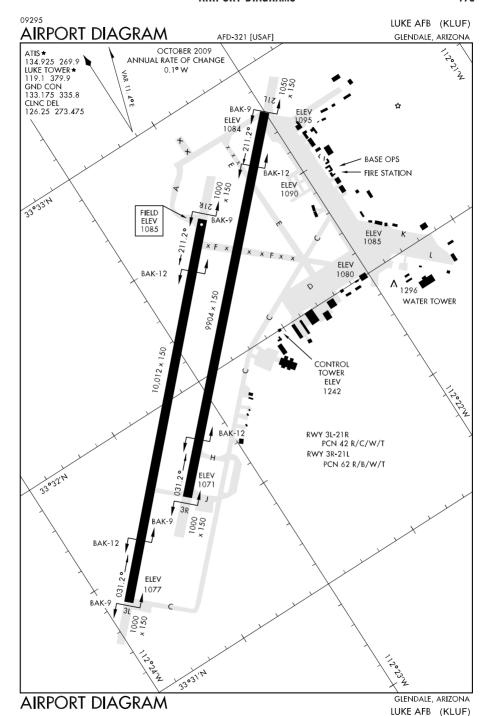


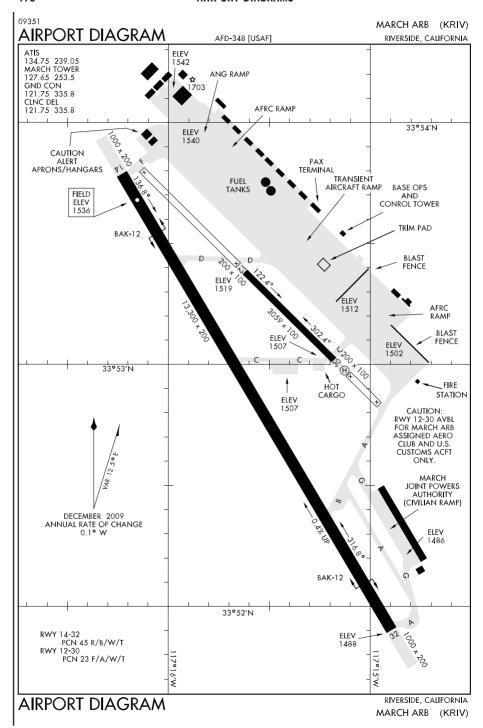


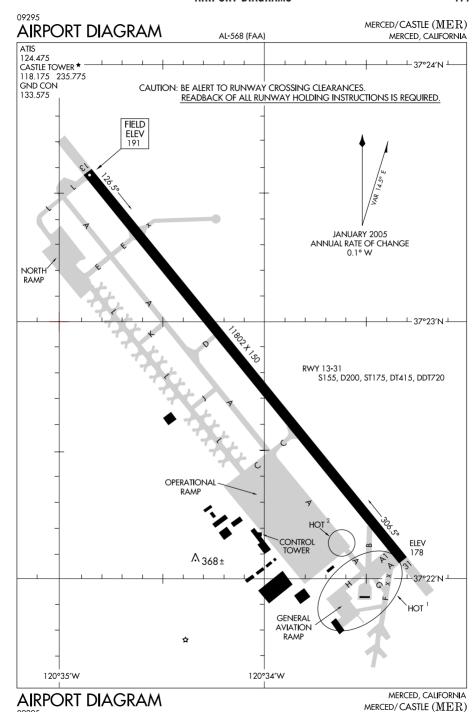
SW, 17 DEC 2009 to 11 FEB 2010

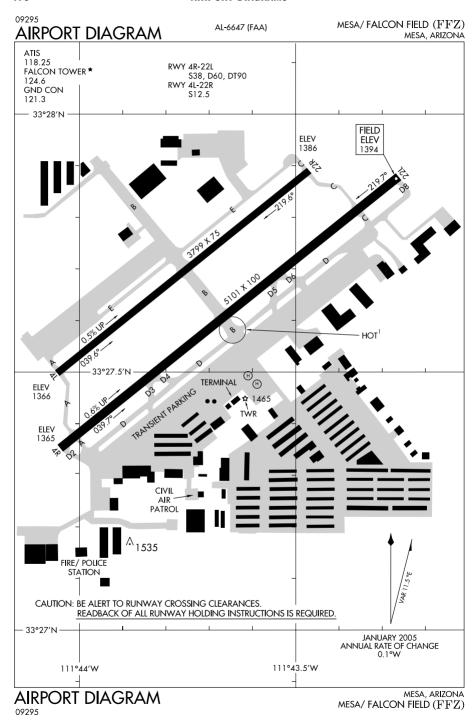




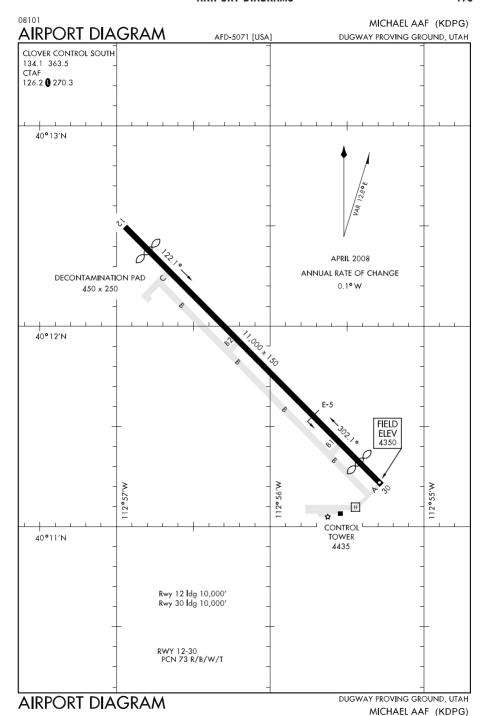


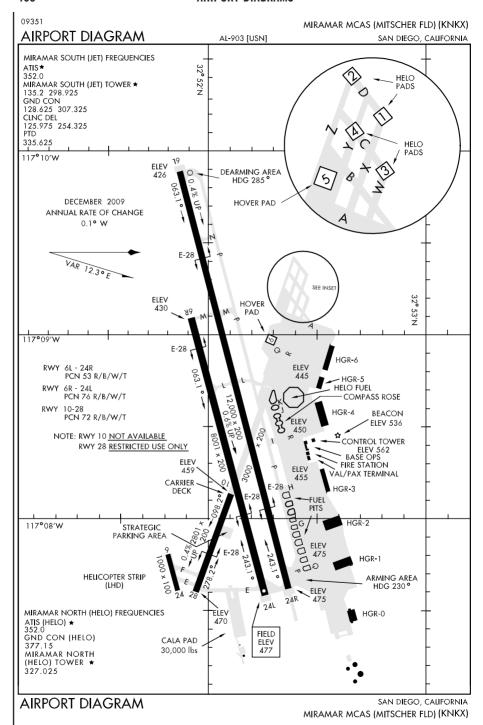




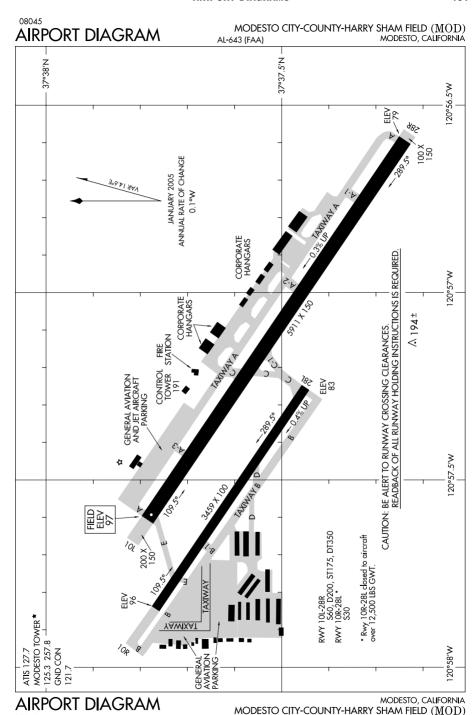


SW, 17 DEC 2009 to 11 FEB 2010



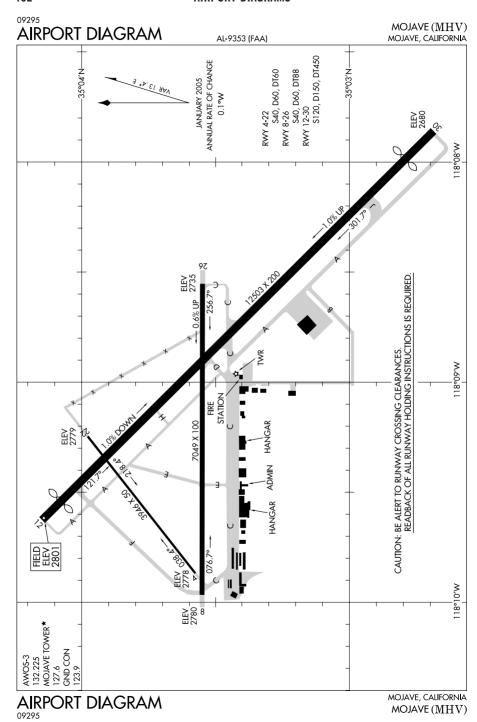


SW, 17 DEC 2009 to 11 FEB 2010

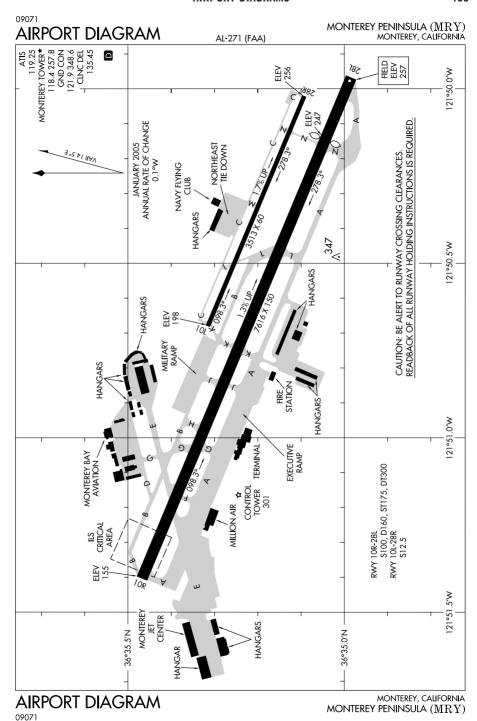


SW, 17 DEC 2009 to 11 FEB 2010

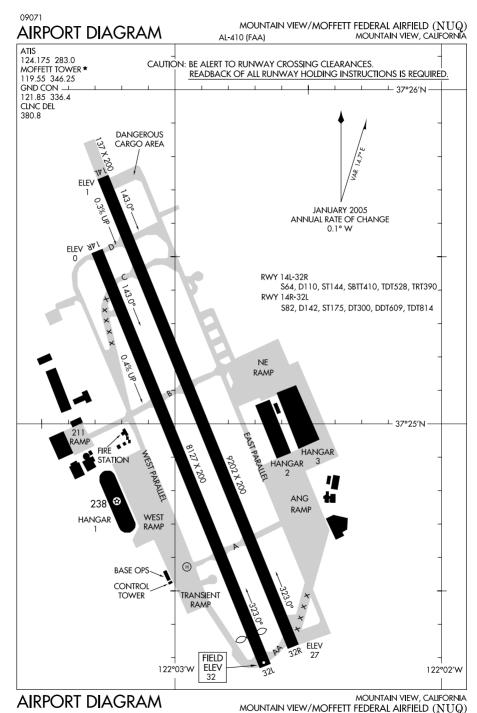
08045

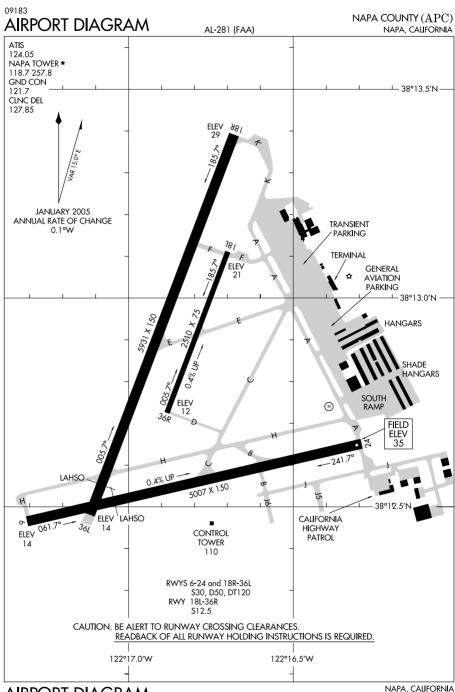


SW, 17 DEC 2009 to 11 FEB 2010

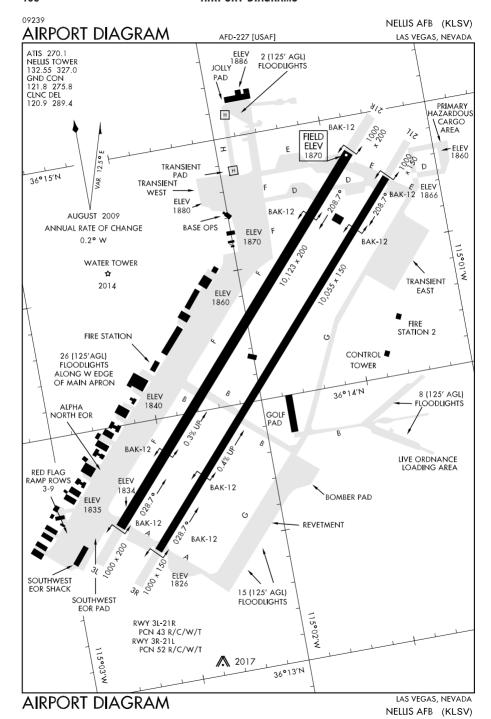


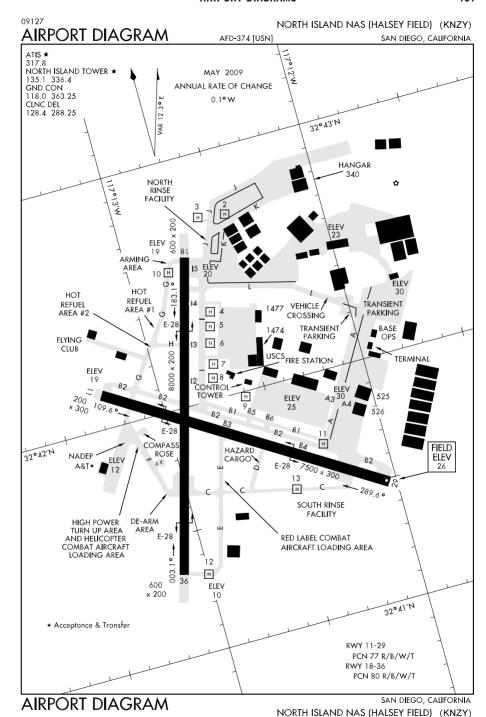
09071

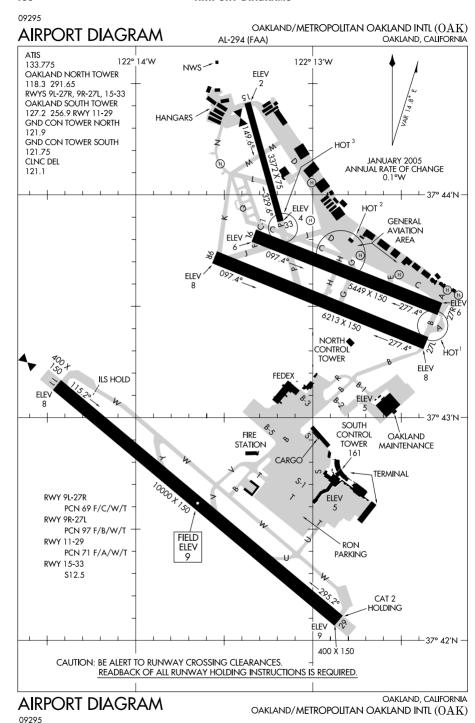




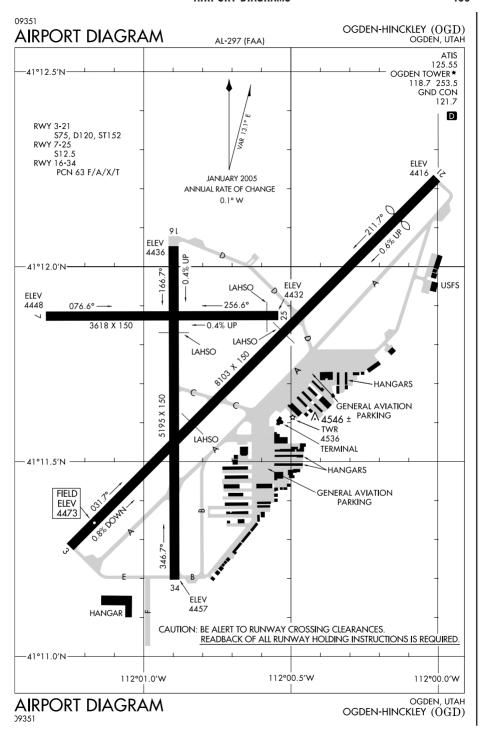
NAPA COUNTY (APC)



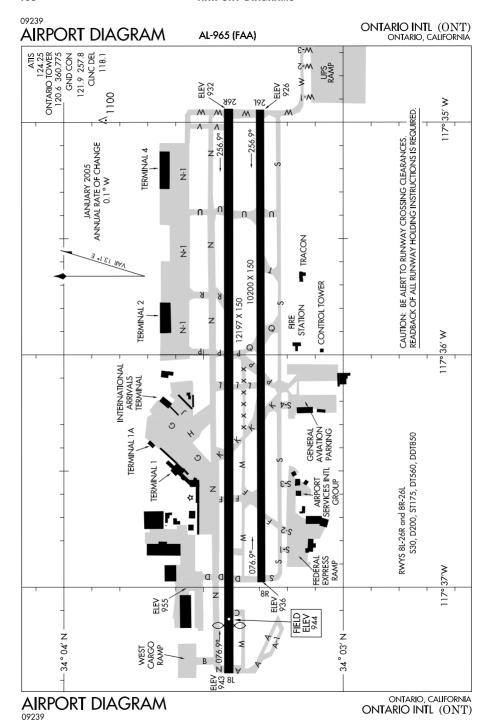


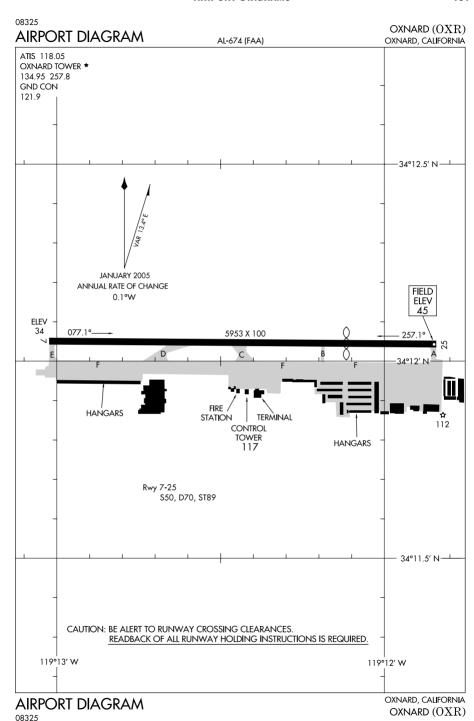


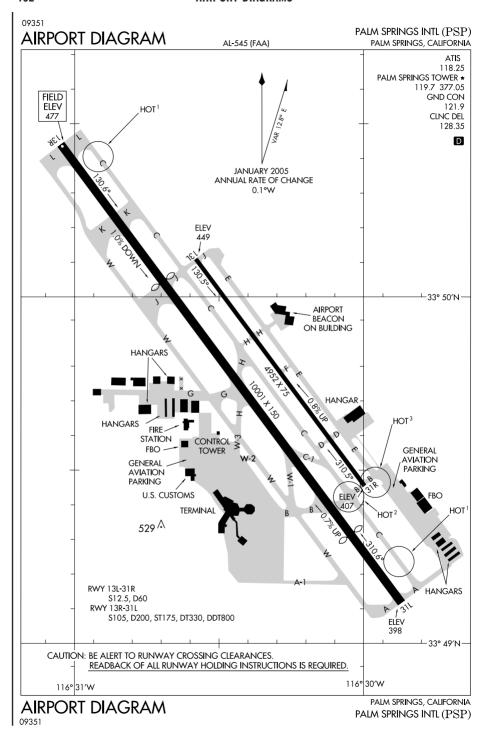
## SW, 17 DEC 2009 to 11 FEB 2010



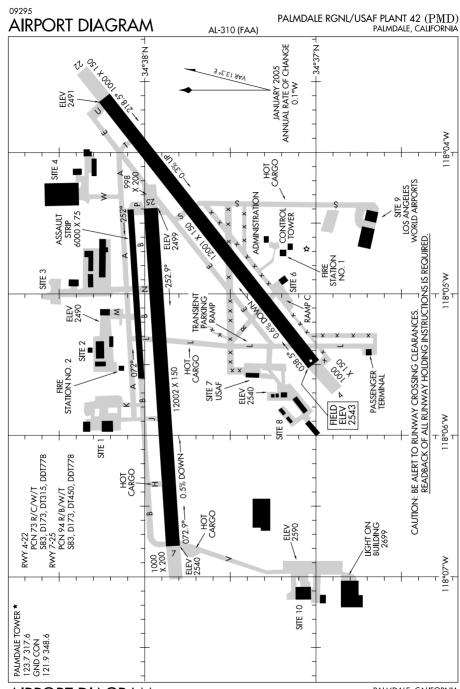
SW, 17 DEC 2009 to 11 FEB 2010



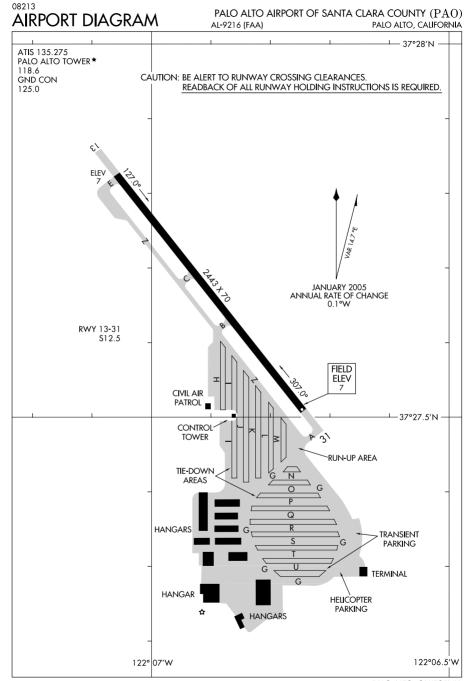




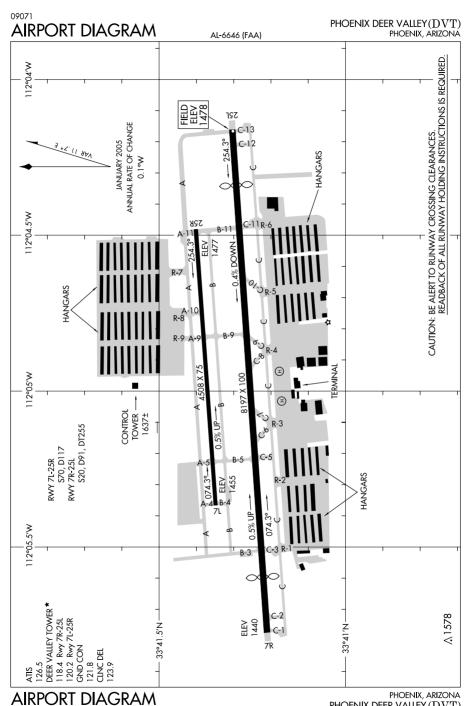
SW, 17 DEC 2009 to 11 FEB 2010



 $\begin{array}{c} \text{PALMDALE, CALIFORNIA} \\ \text{PALMDALE RGNL/USAF PLANT 42 } (PMD) \end{array}$ 

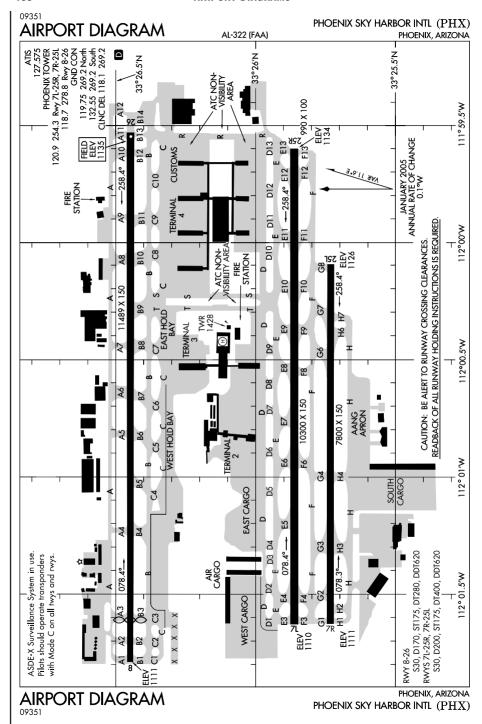


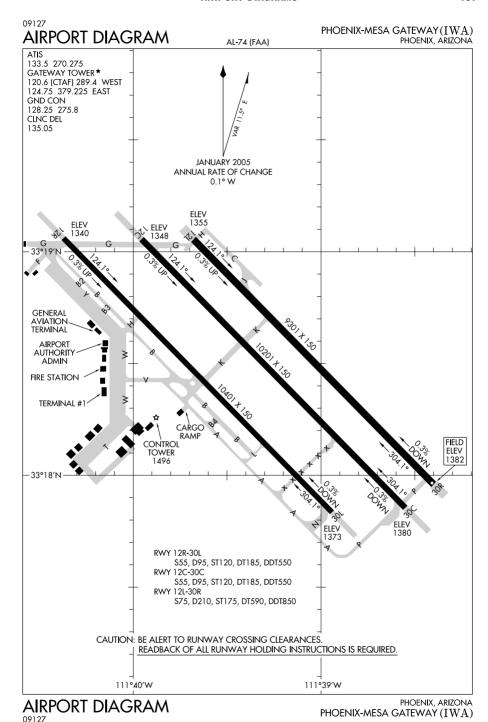
PALO ALTO, CALIFORNIA PALO ALTO AIRPORT OF SANTA CLARA COUNTY (PAO)

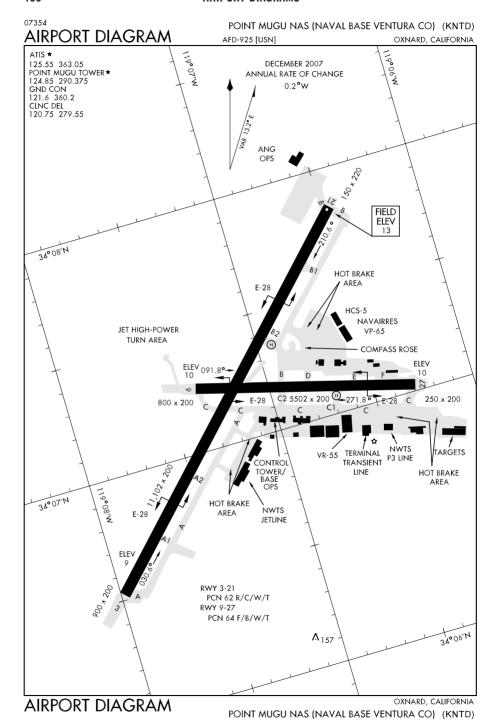


09071

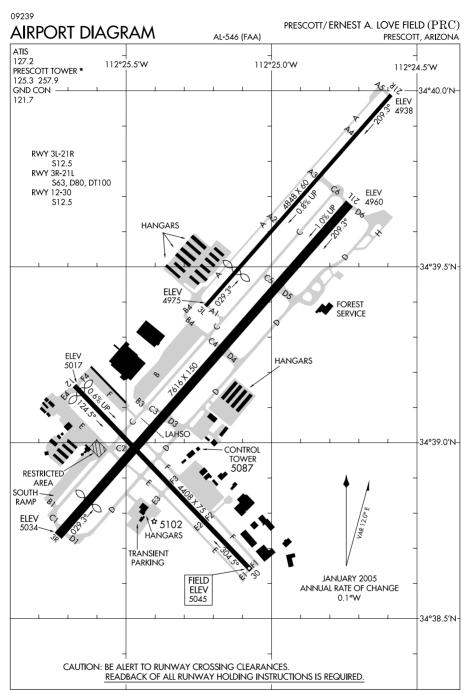
PHOENIX, ARIZONA PHOENIX DEER VALLEY (DVT)



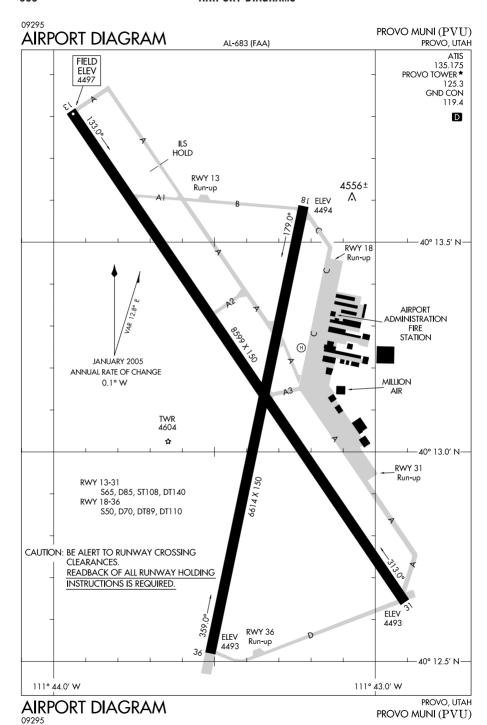


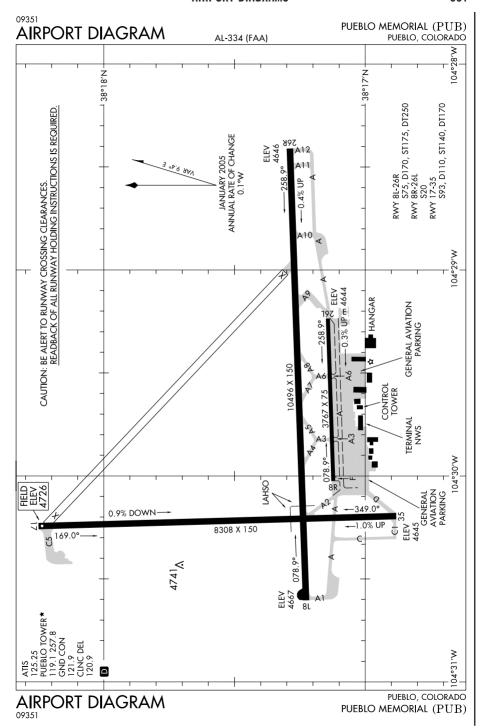


SW, 17 DEC 2009 to 11 FEB 2010

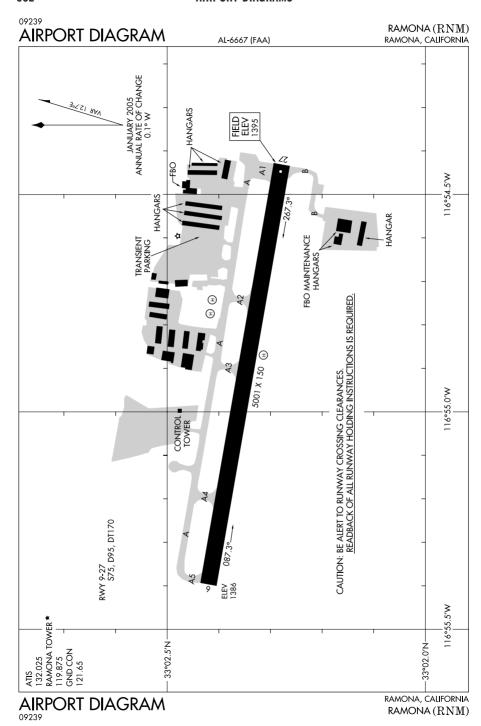


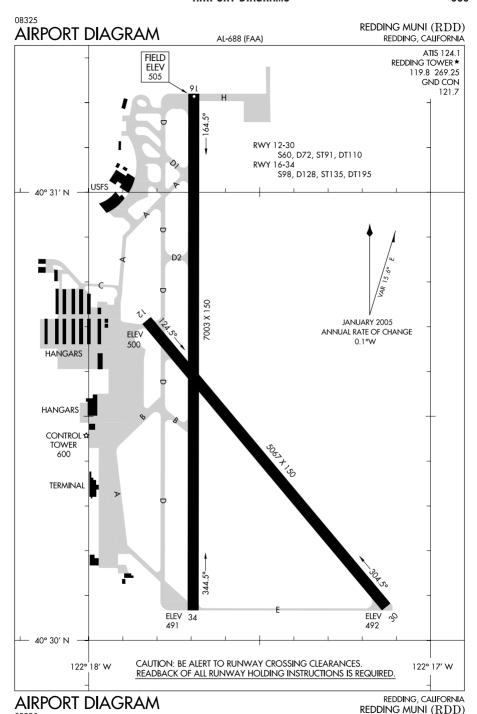
 $\begin{array}{c} \text{PRESCOTT, ARIZONA} \\ \text{PRESCOTT/ ERNEST A. LOVE FIELD } (PRC) \end{array}$ 



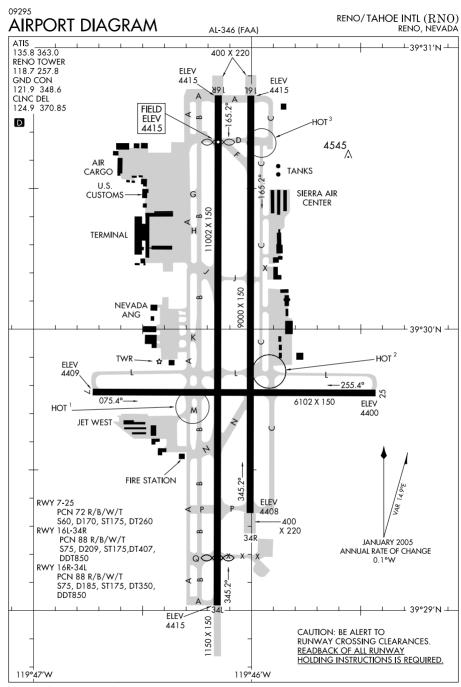


SW, 17 DEC 2009 to 11 FEB 2010

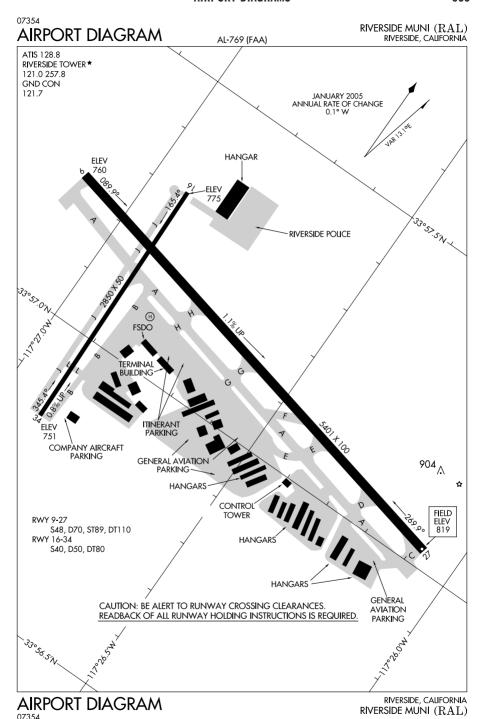


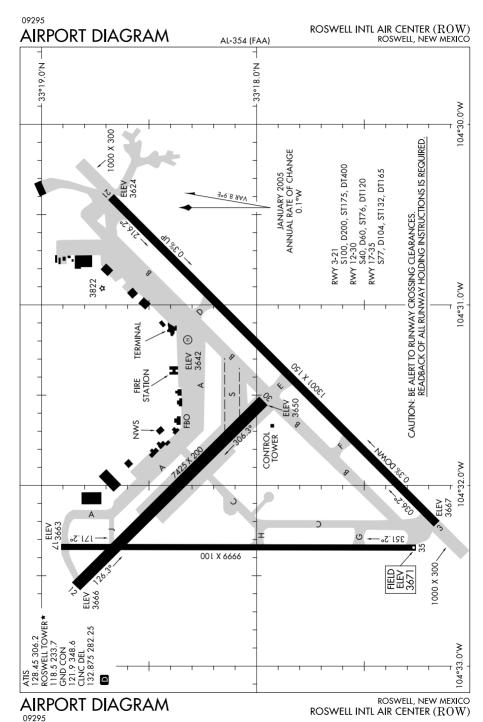


SW, 17 DEC 2009 to 11 FEB 2010

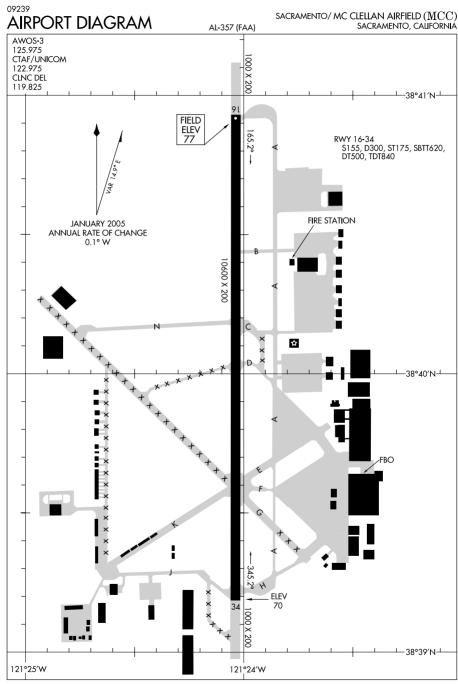


 $\begin{array}{c} \text{RENO, NEVADA} \\ \text{RENO/TAHOE INTL}\left(RNO\right) \end{array}$ 

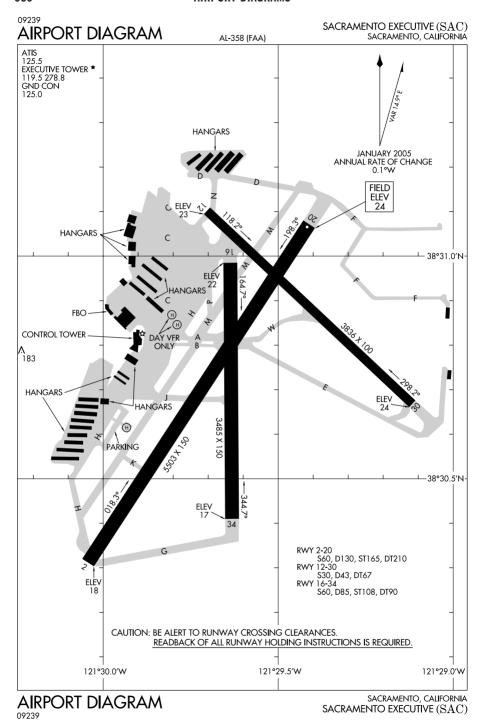




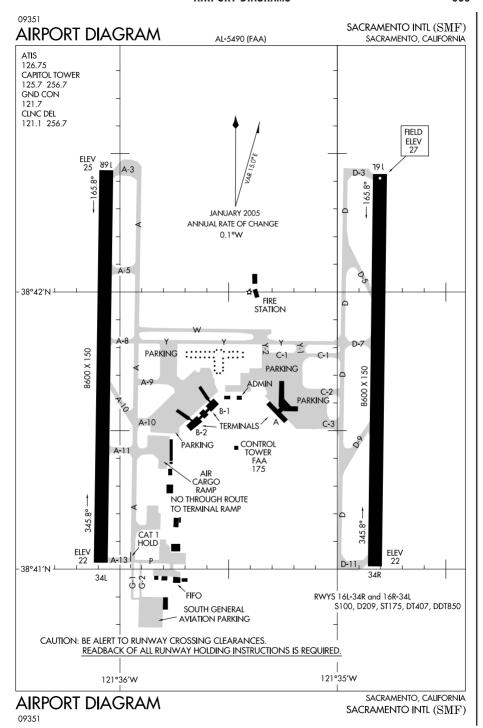
SW, 17 DEC 2009 to 11 FEB 2010

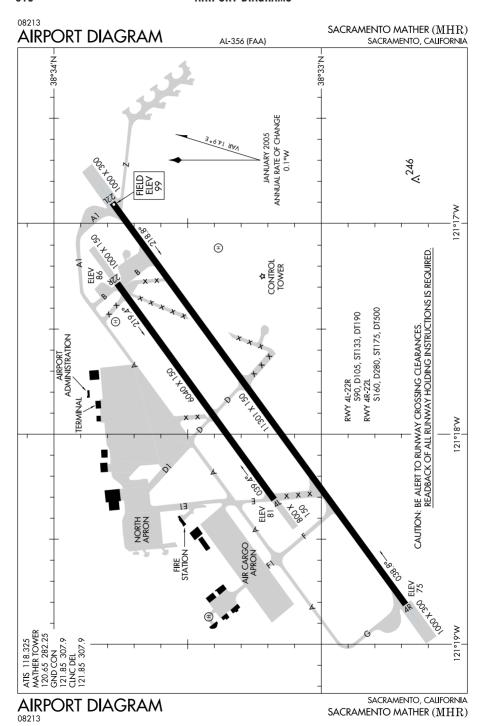


SACRAMENTO, CALIFORNIA SACRAMENTO/ MC CLELLAN AIRFIELD (MCC)

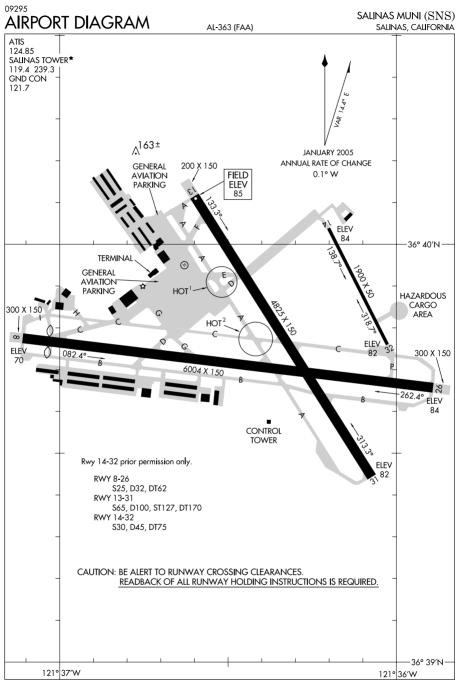


SW, 17 DEC 2009 to 11 FEB 2010

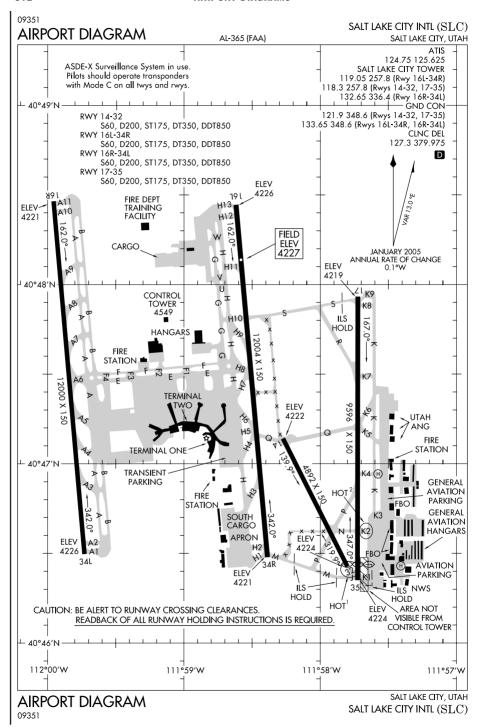




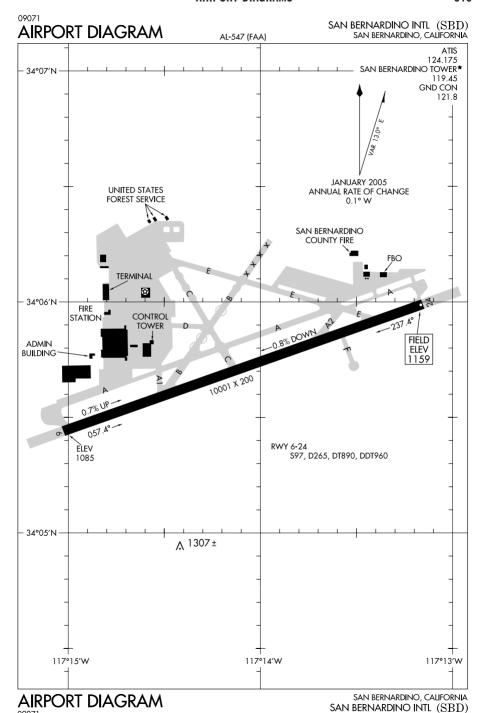
SW, 17 DEC 2009 to 11 FEB 2010

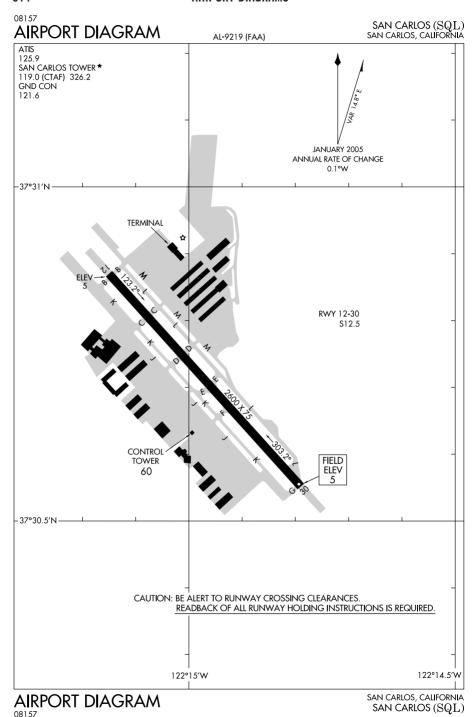


SALINAS, CALIFORNIA SALINAS MUNI (SNS)

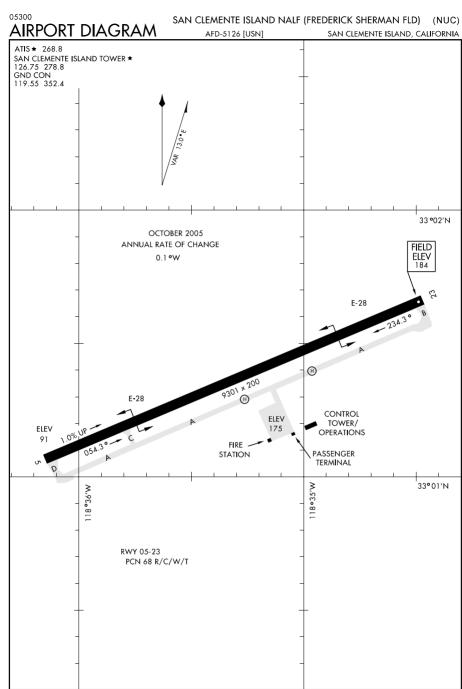


SW, 17 DEC 2009 to 11 FEB 2010



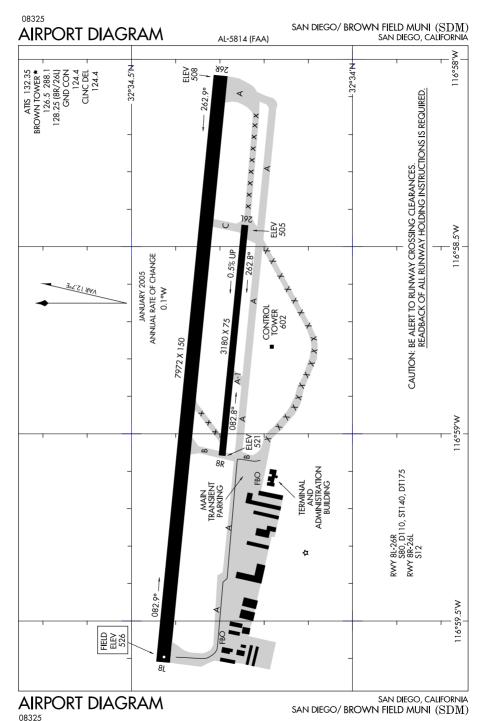


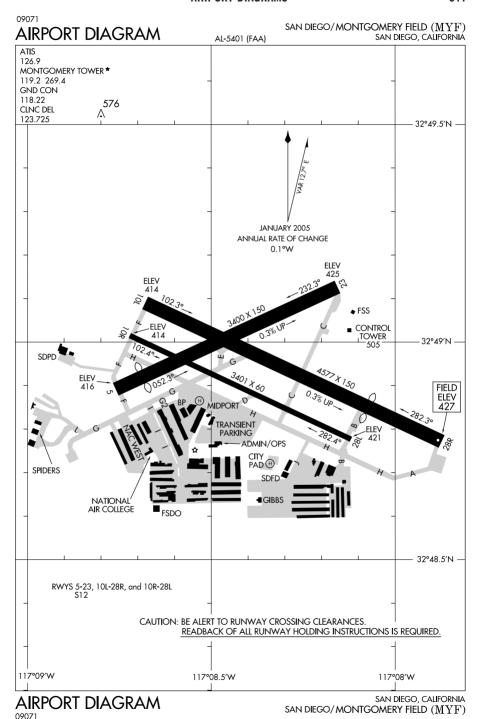
## SW, 17 DEC 2009 to 11 FEB 2010

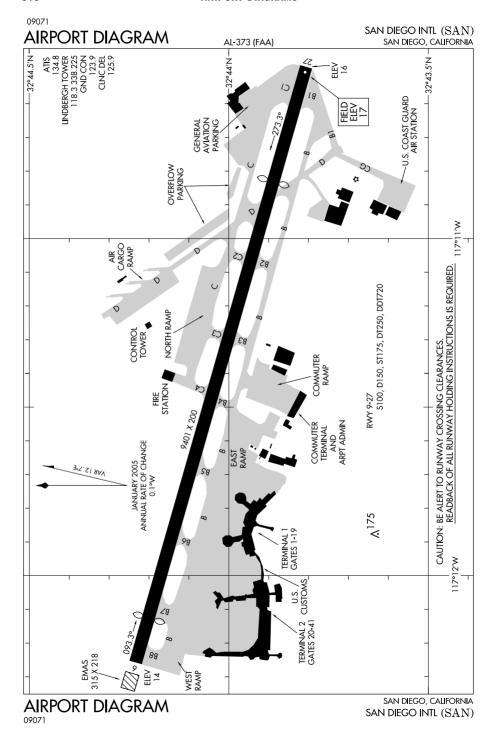


AIRPORT DIAGRAM

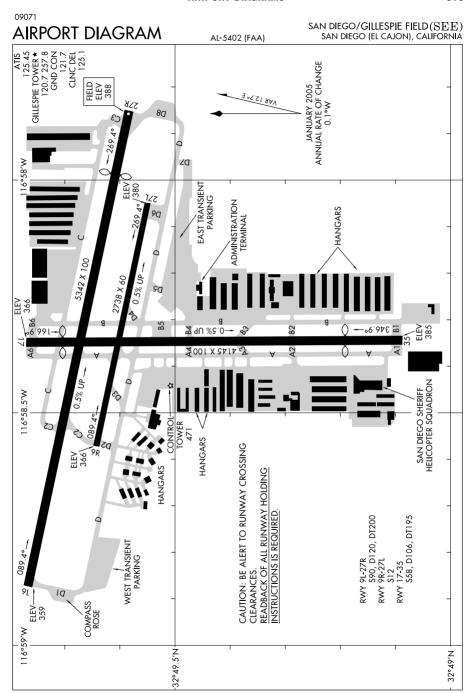
SAN CLEMENTE ISLAND NALF (FREDERICK SHERMAN FLD) (NUC)



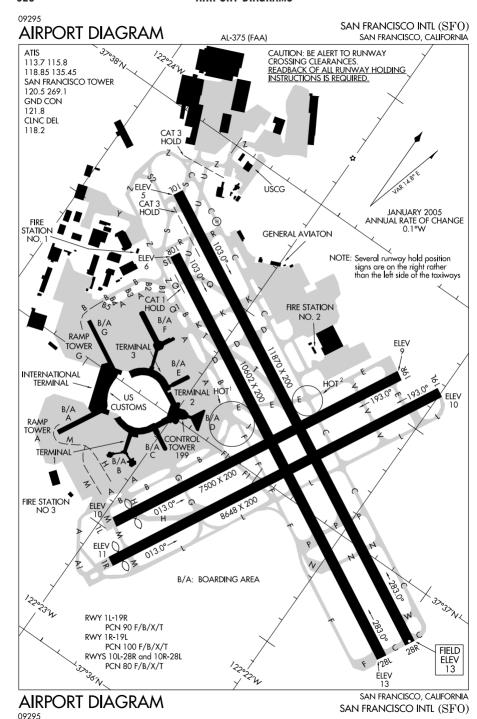


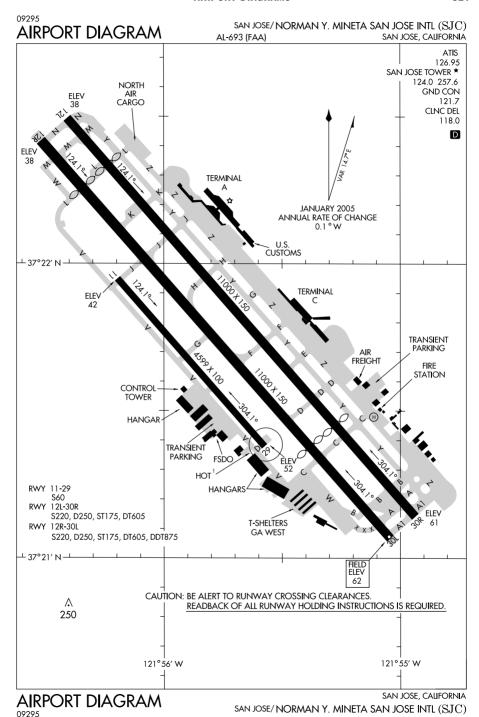


SW, 17 DEC 2009 to 11 FEB 2010

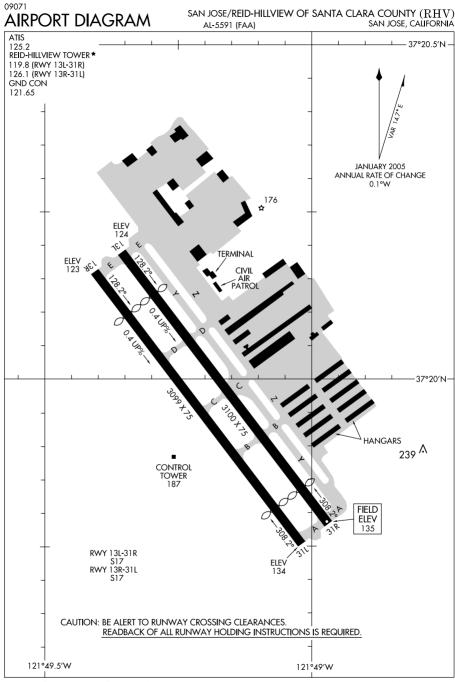


SAN DIEGO (EL CAJON), CALIFORNIA SAN DIEGO/GILLESPIE FIELD (SEE)

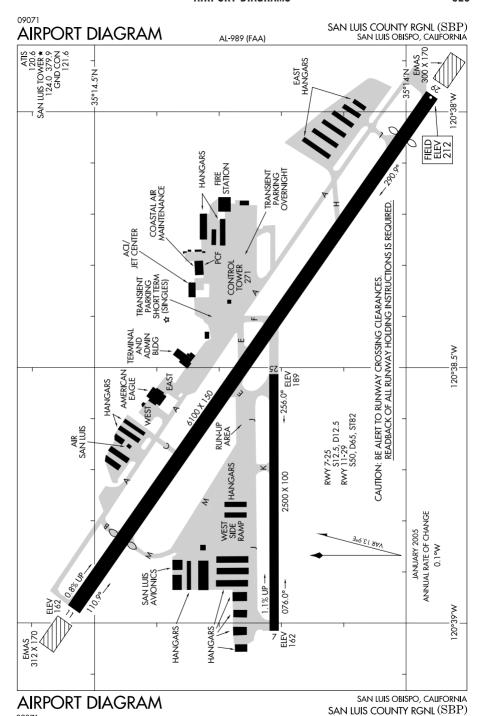




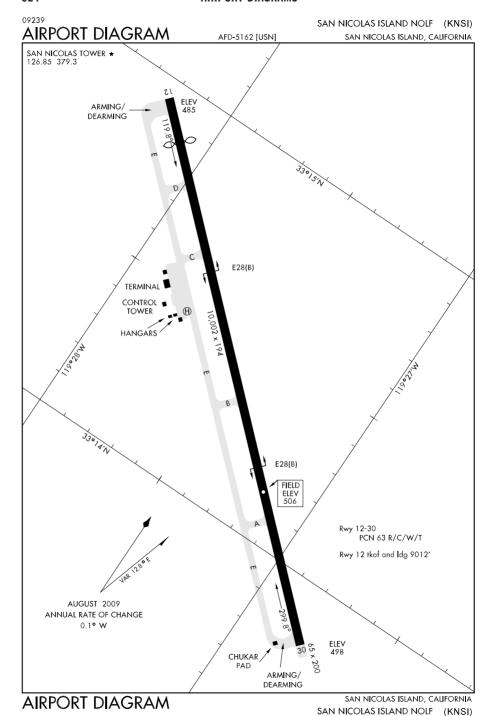
SW, 17 DEC 2009 to 11 FEB 2010



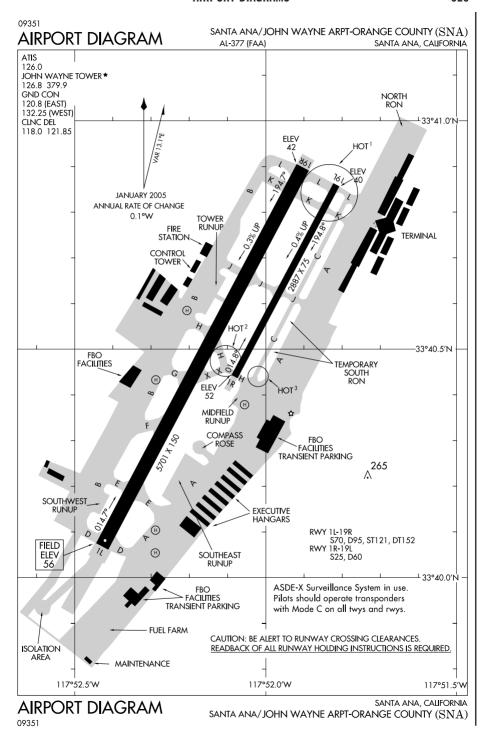
SAN JOSE, CALIFORNIA SAN JOSE/REID-HILLVIEW OF SANTA CLARA COUNTY  $(RHV)\,$ 

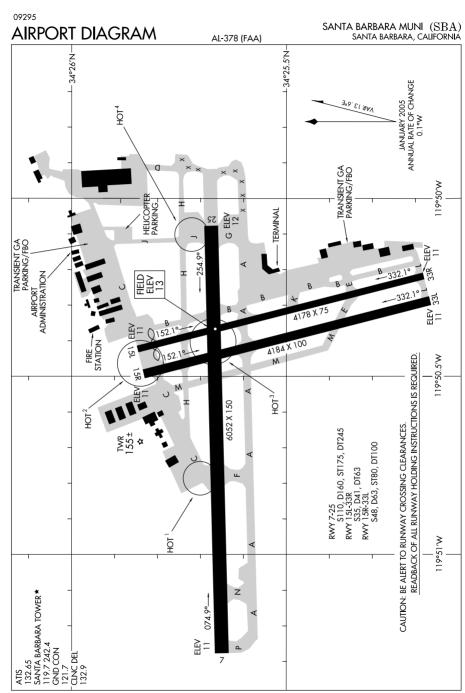


09071

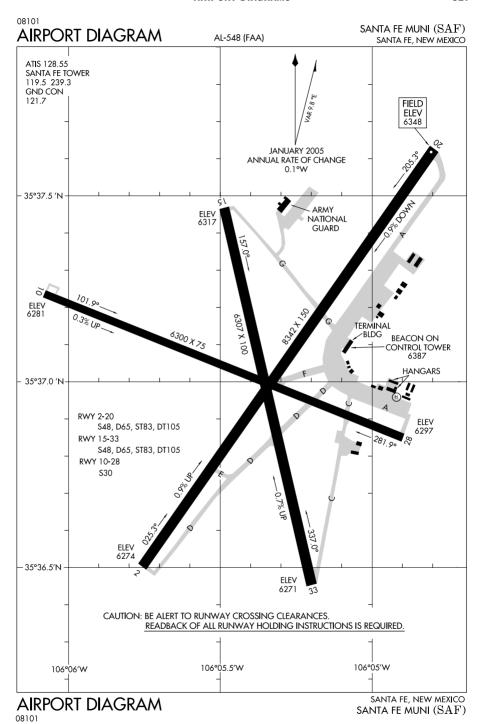


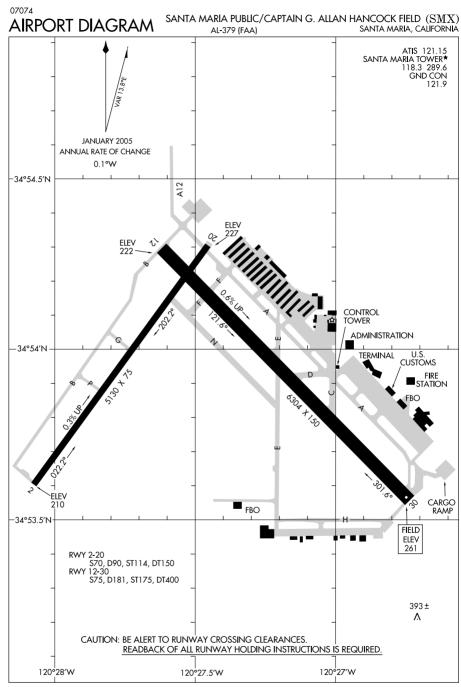
SW, 17 DEC 2009 to 11 FEB 2010



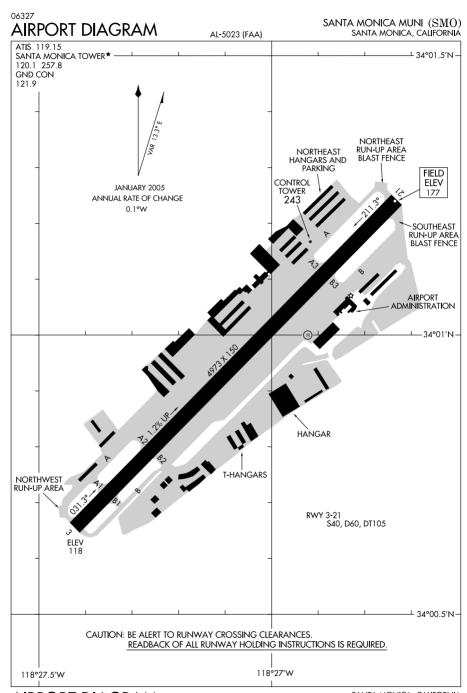


SANTA BARBARA, CALIFORNIA SANTA BARBARA MUNI (SBA)

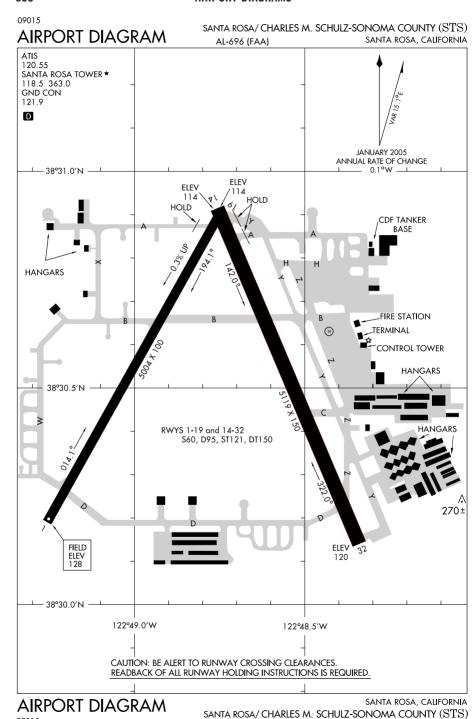


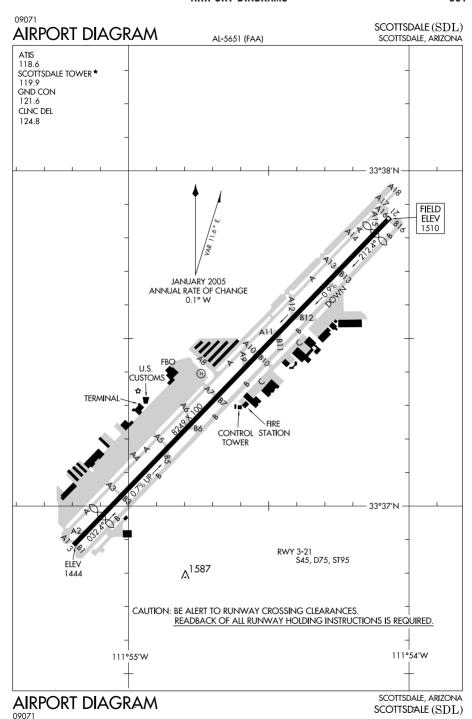


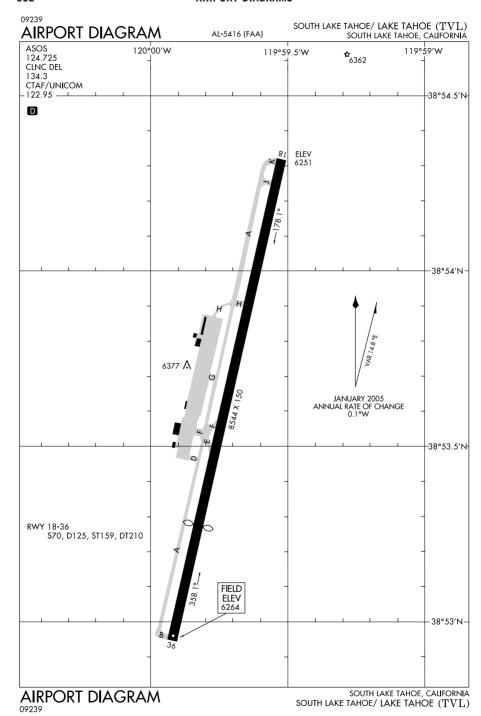
AIRPORT DIAGRAM SANTA MARIA PUBLIC/CAPTAIN G. ALLAN HANCOCK FIELD (SMX)

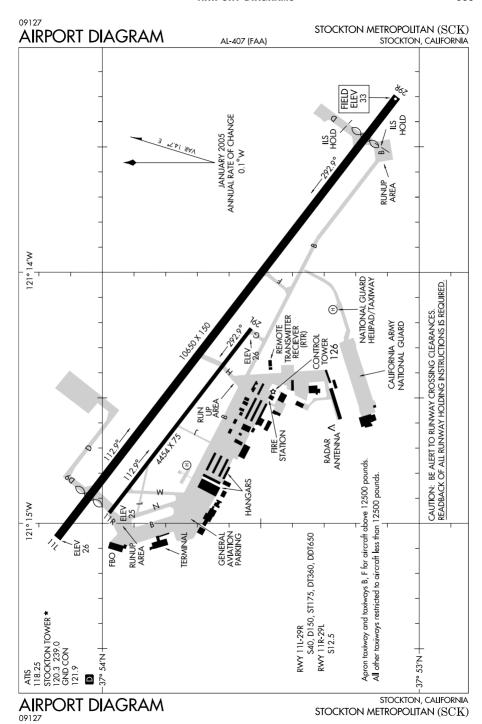


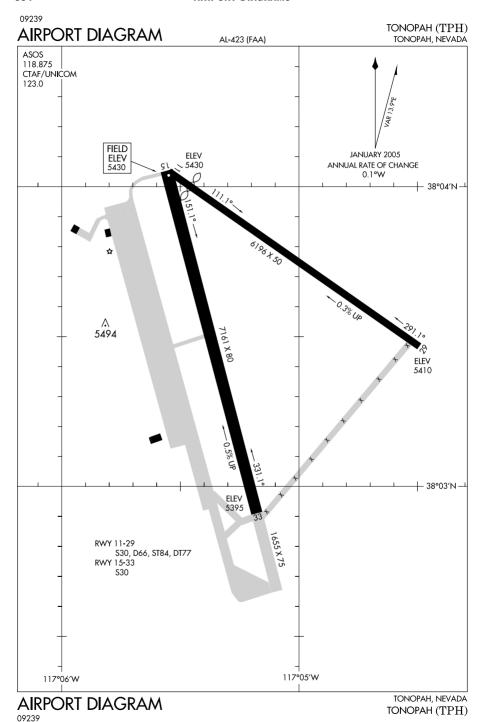
SANTA MONICA, CALIFORNIA SANTA MONICA MUNI (SMO)

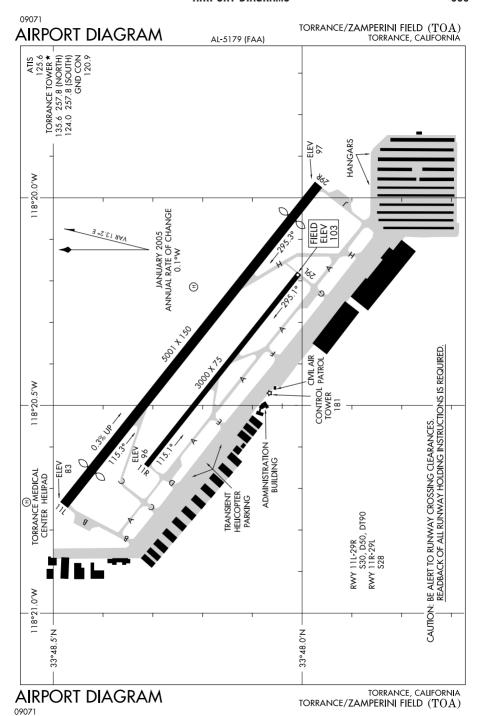


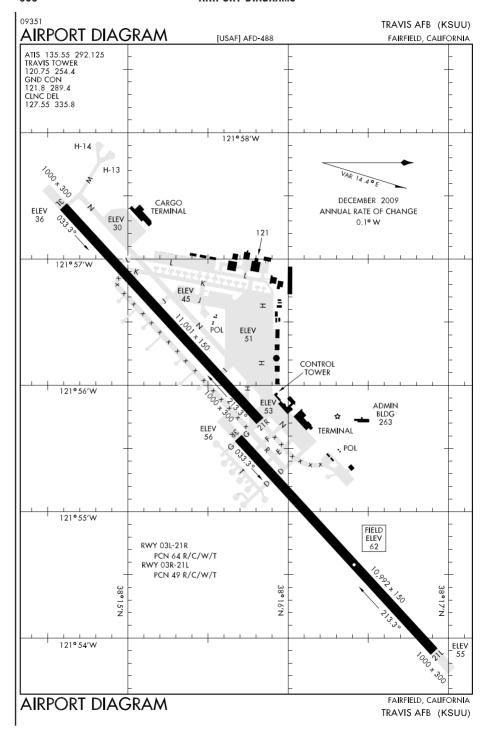




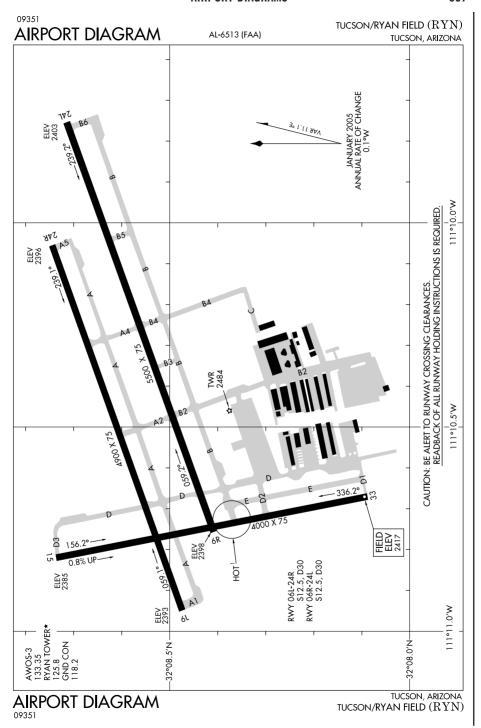




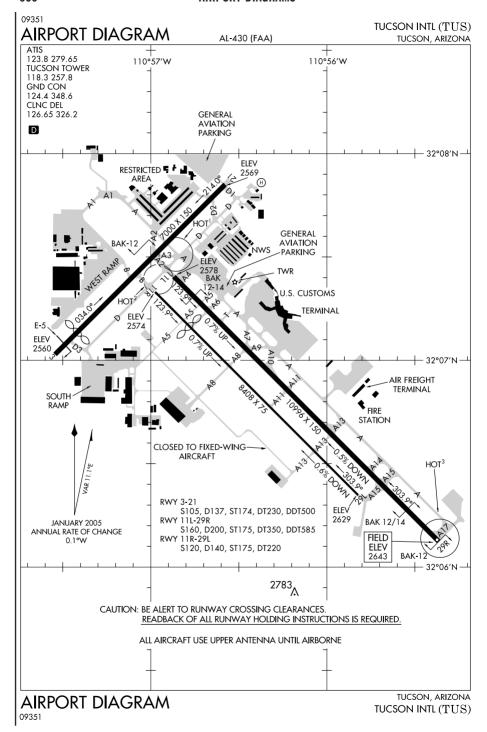




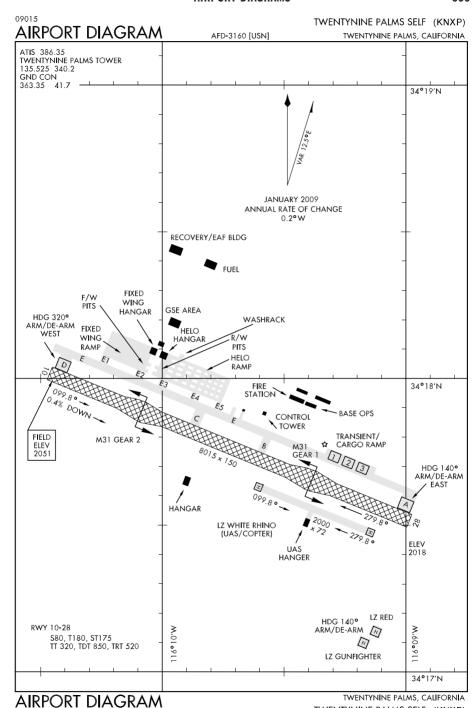
SW, 17 DEC 2009 to 11 FEB 2010



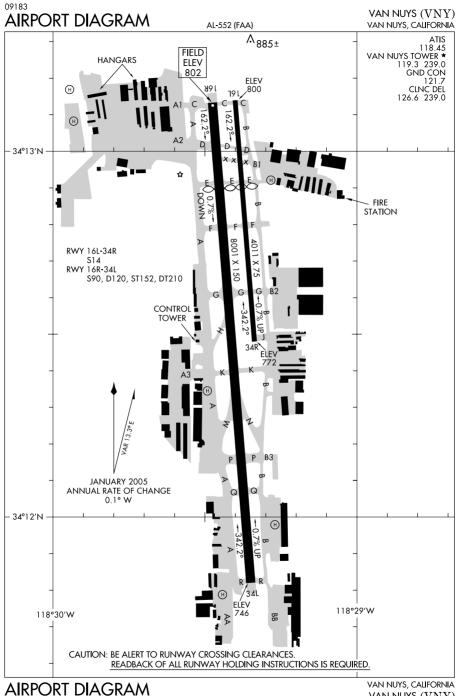
SW, 17 DEC 2009 to 11 FEB 2010



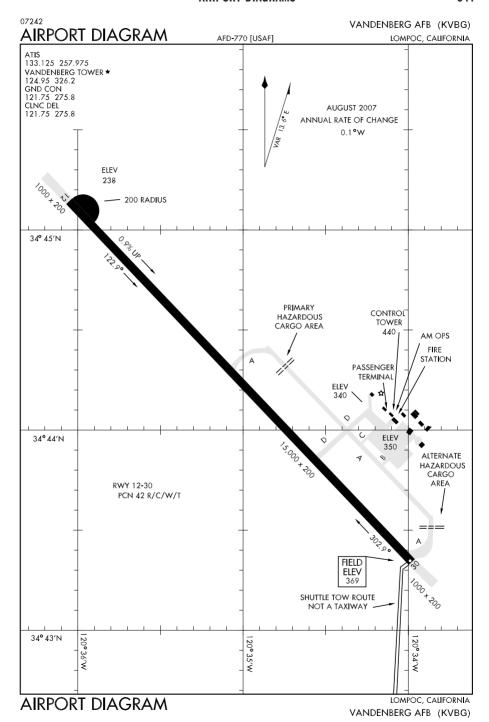
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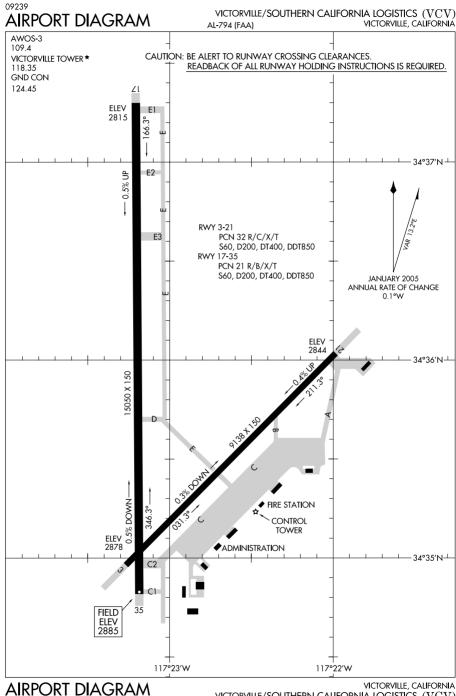


TWENTYNINE PALMS SELF (KNXP)



VAN NUYS (VNY)





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VICTORVILLE, CALIFORNIA VICTORVILLE/SOUTHERN CALIFORNIA LOGISTICS (VCV)

